

# PUBLIC HEALTH REPORTS

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## THE PLAGUE SITUATION.

In New Orleans the only plague-infected rat found to the present time was that noted in last week's Public Health Reports, as reported on July 27. Passed Asst. Surg. Francis has been detailed to New Orleans to assist in the examination of the rats collected. All vessels coming to the dock are using rat guards, and all those coming to the Stuyvesant dock, where the infected rat was found, are using double guards and also watchmen at the gangplanks when the planks are down.

In Porto Rico one case of plague was reported in the Puerta de Tierra section of San Juan on July 30; July 31, no case; August 1, no case; on August 2 a diagnosis of plague was confirmed in a case reported in Santurce as suspicious on July 18; August 3 to 5 inclusive, no new case. This makes a total for all Porto Rico, to and including August 5, of 47 cases, of which 31 occurred in San Juan, 11 in Santurce, 2 in Carolina, 1 at Loiza, 1 in Dorado, and 1 on a vessel at Arroyo.

In Cuba no new case has been reported since July 22, and the total number of cases in Habana to August 5 remains 3 cases, as previously reported.

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## HOW TO POISON RATS.

By W. C. RUCKER, Assistant Surgeon General, Public Health and Marine-Hospital Service.

Get a loaf of stale bread, cut it into pieces about 1 inch square by three-quarters of an inch thick. Get a good rat poison. There are two chief kinds of rat poison on the market, one containing arsenic and the other phosphorus. You can tell phosphorus paste because it smells like a match head. Either one of these poisons is good, but in some respects phosphorus seems to be the better, as it shines at night, and the rats like its odor and taste. A small quantity will kill them, and, as it acts rather slowly, they go outside the house to die. If the poison used is too hard to spread easily on the bread, set the container in some hot water. Some pastes are thin enough so that this is unnecessary. Do not get any of the paste on your hands because it may burn the skin, and unless the hands are very carefully washed, the poison may be carried to the mouth by the fingers soiled with it. It is best to wear a pair of leather or rubber gloves when preparing the poison. Spread the poison on the pieces of bread with a knife. Be careful that all sides of the pieces are smeared with the poison. As fast as poisoned pieces of bread are

prepared they should be put in a covered bucket, and when a sufficient quantity is ready, it should be distributed. Bear in mind that arsenic poison has the disadvantage that it does not deteriorate, and therefore it may be taken by some animal which it is not intended to poison a long time after it has been put out; also bear in mind that phosphorus is liable to spontaneous combustion, especially when put in a warm place or exposed to the direct rays of the sun. Phosphorus pastes which have glucose as a base are less liable to spontaneous combustion. Do not put the poisoned pieces of bread in the open because they may be taken by children or domestic animals, but put them in the rat holes where they can not be gotten at by human beings or domestic animals. When this is not practicable, get a small box and put small pieces of poisoned bread in a bowl, cover the bowl with the box, and bore a hole 2 inches in diameter in each end of the box. These holes are big enough to admit the rats and will keep out cats, dogs, and chickens. Keep track of every piece of poison put out; then after it has been out long enough you can collect the pieces of poison which remain untouched.

Rats will not take poison in places where there is plenty of other food. Therefore to be most successful in rat poisoning the premises should be thoroughly cleaned and all foodstuffs protected from rats by the use of metal screening or metal containers. Garbage should be placed in water-tight metal garbage cans only. A starved rat takes poison quite readily.

## YELLOW FEVER.

### Cases and Deaths Reported During 1911.

Country and town.	January.		February.		March.		April.		May.		June.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Barbados.....									1			
Bridge-town.....											1	
Bissago Islands:												
Bulama.....									(1)			
Brazil:												
Bahia.....								5				
Ceara.....							1	1				
Manaos.....		39		45		34		13		23		3
Para.....	30	14	28	14	2	2	1	1	1	2	3	
Pernambuco.....						1		1				
Rio de Janeiro.....					1							
British Gold Coast:												
Accra.....									3			
Ecuador:												
Bucay.....									1			
Duran.....							1	1				
Guayaquil.....	40	15	27	6	41	14	31	9	30	16	18	6
Milagro.....							3	2	6	3	8	5
Naranjito.....					3	1	1		2			
San Antonio Hacienda.....					1	1						
Taguaci.....											1	
Gambia:												
Bathurst.....					(1)				5	2		
Mexico:												
Frontera.....											2	1
Salina Cruz.....					1	1						
Portuguese Guinea.....									(1)			
Venezuela:												
Caracas.....	19	10	9	6								
La Guaira.....	1	1										
Total.....	90	70	64	71	49	54	38	33	49	46	32	14

<sup>1</sup> Present.

<sup>2</sup> From Laguna.

## YELLOW FEVER—Continued.

## Cases and Deaths Reported During 1911—Continued.

Country and town.	July.		August.		Septem-ber.		October.		Novem-ber.		Decem-ber.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
At sea <sup>1</sup> .....											1	1	1	1
Barbados.....													1	
Bridgetown.....													1	
Brazil:														
Bahia.....														5
Ceara.....		1											1	2
Manaos.....		5	2	2	5	11	10	4	2		1	1	17	182
Para.....	3				2				1	1	1	1	72	35
Pernambuco.....		4		2	(2)	1		2						11
Rio de Janeiro.....													1	
British Gold Coast:														
Accra.....													3	
Colombia:														
Sabanilla.....									1					1
Ecuador:														
Barbahoya.....	1	1	1	1									2	2
Bucay.....					1		3	1	3	3			8	4
Calaroma.....	1	1											1	1
Changur.....					1	1							1	1
Chobo.....							2		1				3	
Duran.....											3	2	4	3
Guayaquil.....	5	2	7	2	5	2	13	7	7	2	12	7	236	88
Milagro.....	8	8	1				3		1	1	7	1	37	20
Naranjito.....					3	1			1	1			12	3
San Antonio Hacienda.....									1	1			1	1
Taguaci.....		1											1	1
Gambia:														
Bathurst.....													5	2
Hawaii:														
Honolulu.....							2						2	
Mexico:														
Frontera.....													1	
Merida.....			2		24	5	11	4	4	4	1	1	42	14
Salina Cruz.....													1	1
Portugese Guinea:														
Boloma.....											1	1	1	1
Senegal:														
Dakar.....											(2)			
Rufisque.....											(2)			
Venezuela:														
Caracas.....	7	1	12		11		21				6		85	17
La Guaira.....													1	1
La Pastora.....			(2)											
Mariquetia.....	2												2	
Sabana Grande.....											(2)			
San Juan.....			1										1	
Total.....	29	24	26	7	52	21	65	18	18	15	32	15	544	397

<sup>1</sup> On a vessel en route from Manaos to Para.<sup>2</sup> Present.<sup>3</sup> Epidemic.

# UNITED STATES.

## MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HYGIENE.

[Adopted since July 1, 1911.]

PHILADELPHIA, PA.

PLUMBING, HOUSE DRAINAGE, PRIVIES, AND CESSPOOLS.

### *Registration.*

**RULE 1.** No person, firm, or corporation shall engage in the plumbing business, as master or journeyman plumber in the city of Philadelphia, or engage to erect, install, alter, repair, or make any addition to a plumbing or drainage system or systems in said city, unless such person, firm, or corporation shall furnish to the bureau of health a certificate from the duly appointed board of examiners certifying that such person, firm, or corporation is qualified to engage in said business as a master plumber, master plumbers, or journeyman plumber, and shall have registered his, their or its name or names and business or home address in the office of the bureau of health upon such form or forms as may from time to time be furnished and prescribed by said bureau of health, provided that the registration of any one member of a firm or corporation or of the superintendent or foreman thereof shall be deemed sufficient.

Every person, firm or corporation, qualified as herein provided, shall receive from said bureau of health a certificate of registration, which shall for the period of one calendar year or fractional part thereof next ensuing from the date of such registration entitle the person, firm, or corporation therein named to engage in and carry on the business of plumbing in the city of Philadelphia as a master plumber, master plumbers, or journeyman plumber.

### *Reregistration.*

**RULE 2.** At the expiration of each calendar year said certificate of registry shall be null and void. A registered master or journeyman plumber desiring to continue in the business of plumbing and drainage for the ensuing year shall, between the 1st and 31st days of December of each and every year, surrender the said certificate of registry for the then current year to the bureau of health and reregister his, their, or its name or names and business or home address as hereinbefore provided, for which reregistration a master plumber shall pay to the bureau of health the sum of \$1 and a journeyman plumber shall pay the sum of 25 cents. Any person, firm, or corporation engaged in the plumbing business, failing to reregister during the time specified, must present to the bureau of health a certificate from the board of examiners as to qualification before he, they, or it shall be reregistered.

### *Plumbers coming from other places.*

**RULE 3.** No person, firm, or corporation engaged in the business of plumbing and drainage in other places as master or journeyman plumbers desiring to do plumbing and drainage work in the city of Philadelphia shall enter upon such work until he, they, or it shall have qualified as hereinbefore provided in rule 1, except a person, firm, or corporation holding a license, or certificate, granted by any first, second, or third class city of this Commonwealth to engage in or work at the business of plumbing and house drainage. Such person, firm, or corporation shall be registered and allowed to enter upon such work without furnishing a certificate from the board of examiners; provided, however, that such registration shall be restricted and limited



to such plumbing and drainage work as he, they, or it shall have contracted for at the time of registry. On the completion of such contract or contracts the registration of such person, firm, or corporation shall be null and void, and no further permit shall be issued to such person, firm, or corporation until he, they, or it shall have first registered his, their, or its name or names and business address as hereinbefore provided.

*Registration for institutions, etc.*

RULE 4. A person upon presenting satisfactory proof of his ability may be registered as a master plumber for the care, alteration, or addition of the drainage system of a designated manufacturing or mercantile establishment, institution, hotel, etc., where it is necessary to have the continual service of a master plumber, and receive a certificate of registry; but in no case shall a person be permitted to do any plumbing or drainage work in any building or buildings other than that for which he is registered unless he has first secured a place of business, as provided for in rule 5 of these rules and regulations.

*Place of business.*

RULE 5. Every registered master plumber shall have a bona fide place of business in the city of Philadelphia, and shall display on the front of his or their place of business a sign, "Registered plumber," bearing the name or names of the person, firm, or corporation in letters not less than 3 inches high, except as provided for in rules Nos. 3 and 4.

*Registered master plumbers only to engage in the plumbing business.*

RULE 6. No person other than a registered master plumber shall be allowed to carry on or engage in the plumbing or drainage business, nor shall any person or persons expose the sign of plumbing or house drainage, or any advertisement pertaining thereto, unless he or they shall have first been registered in the office of the bureau of health and received a certificate of registry. Nor shall any person or persons other than a registered master plumber (or a person in his or their employ or under his or their supervision) be allowed to alter, repair, or make any connections with any drain, soil, waste, or vent pipe, or any pipe connected therewith.

*No registered plumber to allow use of name.*

RULE 7. No person, firm, or corporation registered as a master plumber or master plumbers shall allow the use of his, their, or its name by any person or persons, directly or indirectly, for the purpose of obtaining a permit or permits to do any plumbing or drainage work.

*Certificates may be revoked.*

RULE 8. The certificate of registry granted under these rules and regulations may be suspended or revoked by the bureau of health when a master or journeyman plumber, firm, or corporation, or the registered representative thereof, shall violate any of these rules and regulations, and shall refuse or neglect to make the necessary corrections to work not approved by the bureau of health, within a reasonable time after notification thereof, or who shall permit the use of his, their, or its name by a person or persons for the purpose of obtaining a permit or permits to do plumbing and drainage work.

*Change of address.*

RULE 9. Every registered master or journeyman plumber, firm, or corporation shall give immediate notice of any change in his, their, or its place of business, and upon his, their, or its retirement from business shall surrender his, their, or its certificate of registry to the bureau of health.

*Names of each member of a firm, etc., to be given.*

RULE 10. Every person, firm, corporation, or representative thereof, in registering, shall give the full name or names of the person, firm, or officers' names of the corporation for which he or they shall register.

*Plans and specifications.*

RULE 11. The drainage of all buildings, public or private, and all alterations, extensions, and additions to drainage systems shall be executed in accordance with plans and specifications previously approved in writing by the bureau of health.

*Filing of plans and specifications.*

RULE 12. There shall be separate plans placed on file in the office of the bureau of health for each building, public or private, accompanied by specifications describing the drainage of said buildings on the blanks prescribed and furnished for this purpose, showing the size and kind of pipes, traps, water-closets, fixtures, etc., to be used, and must show partitions and method of ventilating water-closet apartments. Plans must be drawn legibly, in ink, and old work shall be shown in red ink. A fee of \$1 shall be paid the bureau of health for each plan approved.

*Owners to sign and furnish plans.*

RULE 13. All plans and specifications for drainage shall be signed in person and furnished by the owner of a building for which said plans are submitted for approval, and shall be prepared by the architect, where one is employed, except when good and sufficient reason is given; then plans and specifications may be signed and furnished by a duly authorized agent or attorney.

*Change in plans.*

RULE 14. No change will be permitted in plans and specifications after they have been approved, unless application is first made in writing by the owner or a duly authorized agent or attorney and the proposed change or amended plans have been submitted and approved in writing by the bureau of health.

*Plans to be submitted by the plumbers.*

RULE 15. Plans and specifications for drainage shall be submitted to the bureau of health for approval by the registered master plumber, whose name, business address, and register number shall be inserted in the space on the specifications provided for that purpose, and no plan will be approved or accepted by the bureau of health without said name, address, and registered number.

*Approval of plans.*

RULE 16. Plans will be approved or rejected within 24 hours when practicable, and under no circumstances will a delay beyond 10 days be permitted.

A certificate of approval will be issued in writing when a plan is deemed satisfactory by the inspector of house drainage.

*No verbal approval to be given.*

RULE 17. Under no circumstances whatever shall a verbal approval or permission given by anyone be considered a justification for any deviation from the approved plans, or the violation of any of the rules and regulations governing house drainage.

*Blanks for drawings.*

RULE 18. Blanks for drawings and specifications for drainage will be furnished on application at the office of the bureau of health. One vertical drawing will be sufficient for a building where it can be made to show all the work; if the work is intricate and can not be shown by one drawing, two or more shall be made.

A ground plan of the building showing the position of the main house and branch drains shall, in all cases, be submitted.

*Drainage of buildings erected prior to 1911.*

RULE 19. Whenever it shall come to the knowledge of the bureau of health or complaint in writing shall be made by any citizen that the plumbing or drainage in any building has become a nuisance or is contrary to the provisions and requirements of the act (June 7, 1911), or the ordinances of the city, or is of faulty construction or liable

to breed disease or endanger the health of the occupants, or upon the request of any owner or occupant of any building fitted with plumbing or drainage prior to the passage of the act (June 7, 1911), then the bureau of health shall direct the proper officer to examine the plumbing or drainage in any such building, and the said officer shall make a drawing of the plan of said plumbing, drainage, and sewer and ventilating shaft connections. He shall report his findings in writing to the bureau of health and suggest such changes as are necessary to make the same conform to the rules governing such matters.

The bureau of health shall thereupon notify the owner or agent of any such building of the changes which are necessary to be made in said plumbing or drainage. Said changes shall be made within the time fixed by the bureau of health, and upon refusal or neglect to obey such orders the bureau of health shall institute legal proceedings to have such changes made, and said nuisance abated by action before a justice of the peace or court of record, in which said action the owner or agent of said building may show in defense that the plumbing or drainage was not a nuisance or was not of faulty construction or out of repair, and in case of a building constructed subsequent to the passage of the act (June 7, 1911), said plumbing or drainage was not contrary to the provisions and requirements of the act (June 7, 1911) or ordinances of the city.

#### *Separate drainage.*

RULE 20. The entire drainage system of each lot and building must be separate and independent of that of any other lot or building, and shall be separately and independently connected with the public sewer in the street, fronting said lot or building, where one is provided, and where there is no sewer in the street and it is necessary to construct a private sewer to connect with one on an adjacent street, such plans may be used as may be approved by the board of health, but in no case shall a joint drain be laid in cellars parallel with street or alley.

#### *Main house drain.*

RULE 21. The main house drain shall be not less than 4 inches nor more than 10 inches in diameter, and the fall shall be not less than one-fourth inch per foot, except by special permission of the bureau of health, when it is shown that one-fourth inch fall per foot is impossible. It shall be laid in a trench cut at a uniform grade, or it may be constructed along the foundation walls above the cellar floor, resting on 9-inch brick piers laid in cement mortar (said piers to be not more than 7 feet apart), or it may be suspended from the floor by heavy iron hangers placed at intervals not greater than 7 feet. The use of pipe hooks, gas pipe, or iron driven into walls for supporting drains is prohibited.

#### *Material of drains.*

RULE 22. All house drains laid beneath the ground inside of buildings or beneath the cellar floor shall be plain extra-heavy cast-iron pipe with well leaded and calked joints.

All other drain, soil, or vent pipes connected with the main drain or any of its branches under ground or beneath the cellar floor shall be of plain extra-heavy cast-iron pipe. If the main house drain or its branches, soil, waste, or vent pipes are above the cellar floor or above ground they may be of plain cast-iron pipe, galvanized lap-welded wrought-iron, galvanized-steel, or brass pipe of the weights prescribed.

#### *Terra-cotta pipe.*

RULE 23. Where the ground is of sufficient solidity for a proper foundation, cylindrical terra-cotta pipe of the best quality, free from flaws, splits, or cracks, perfectly burned and well glazed over the entire inner and outer surfaces, may be used if laid on a smooth bottom with a special groove cut in the bottom of the trench for each hub, in order to give the pipe a solid bearing on its entire length, and the soil well rammed on each side of the pipe. The spigot and hub ends shall be concentric. The space between the hub and pipe must be thoroughly filled with cement mortar made of equal parts of the best Portland or American natural cement and bar sand thoroughly mixed dry and enough water afterwards added to give proper consistency. The mortar must be mixed in small quantities and used as soon as made. The joints must be carefully wiped out and pointed, and all mortar that may be left inside removed and the pipe left clean and smooth throughout, for which purpose a swab may be used. Terra-cotta pipe must not be laid closer than 5 feet to any exterior wall of a building or less than 3½ feet below the surface of the ground, nor will it be allowed in bad or made ground, or close to a well used for water supply.

*Coating for cast-iron pipes.*

RULE 24. After the test has been applied and approved by the inspector, cast-iron drain, soil, waste, and vent pipes may be coated, but in no case shall any coating be applied to cast-iron pipe for drainage until the test has been applied and approved.

*Arrangement of drain, soil, waste, and vent pipes.*

RULE 25. The arrangement of drain, soil, waste, and vent pipes shall be as direct as possible; all changes in direction on horizontal pipes shall be made with Y branches, one-sixteenth or one-eighth bends. Where the said pipes are vertical they shall extend in a straight line from the basement to a point at least 2 feet above the highest part of the building or contiguous property; where it is impossible to maintain a straight line, offsets may be used, which must have an angle of not less than 45° to the horizontal. Vertical soil or waste pipes receiving the discharge of a fixture or fixtures on any floor above the first shall be extended in full caliber at least 2 feet above the highest part of the building or contiguous property.

*Size of main house drains.*

RULE 26. The size of the main house drain shall be determined by the total area of the buildings, and paved surfaces to be drained according to the following table, if iron pipe is used. If the pipe is terra cotta, the diameter shall be one size larger for the same amount of drainage area.

Diam- eter.	Fall $\frac{1}{4}$ inch per foot.	Fall $\frac{1}{8}$ inch per foot.
	<i>Square feet drainage area.</i>	<i>Square feet drainage area.</i>
<i>Inches.</i>		
4	1,800	2,500
5	3,000	4,500
6	5,000	7,500
8	9,100	13,600
10	14,000	20,000

The main house drains may be decreased in diameter beyond a rain-water conductor or surface inlet, by the permission of the bureau of health, when the plans show that conditions are such as to warrant such decrease, but in no case shall the main house drain be less than 4 inches in diameter.

*Testing fittings.*

RULE 27. There shall be a fitting on the main house drain, just inside of the foundation of each building for testing purposes, except when the main trap is located inside of the cellar; then the testing fitting shall be next to the main trap on the house side. After the test has been applied, as required by rule 63, and has been approved by a house-drainage inspector, the opening in the testing fitting shall be hermetically sealed by inserting a solid plug with a calked lead joint.

*Cleanouts not to be placed on the sewer side of main trap.*

RULE 28. In no case shall a cleanout be located on the main drain pipe between the main trap and the sewer or on the sewer side of main trap.

*Cleanouts on traps.*

RULE 29. All traps shall be provided with cleanouts or hand holes on the side of trap nearest the fixture, and shall be protected by the water seal of trap.

*Covers for cleanouts.*

RULE 30. The covers of all cleanouts or hand holes inside of buildings shall be properly fitted and made air-tight by the use of a brass screw cap or plug, which shall be not less than one-eighth inch thick; where they screw into iron pipe they shall have a solid square nut three-quarters inch high or countersunk, with a diameter of not

less than  $1\frac{1}{4}$  inches. When the body of the cleanout ferrule is of cast iron it shall be equal in thickness to the cast-iron pipe to which it is to be connected. When of wrought iron it shall be equal in thickness to "Standard" wrought-iron pipe. When the screw cap and ferrule are both of brass they shall be one-eighth inch thick and the nut may be three-eighths inch high. The cleanout of a bath trap shall be covered with a brass screw cap, which shall be exposed on the floor close to the bathtub, and shall be on the side of the trap seal nearest the bathtub, and be protected by the water seal of the trap. Additional cleanouts shall be located at points on the drain pipes when it shall be deemed necessary by the bureau of health.

*Location of main trap.*

RULE 31. The main house drain shall be provided with a main or horizontal trap placed immediately inside the cellar wall nearest the sewer, or at the curb line where the sewer is outside the curb.

If the main trap is located in the cellar or inside of a building the iron main drain pipe shall extend to at least 10 feet beyond the foundation wall.

*Relieving arch.*

RULE 32. Where drains pass through a new foundation wall, a relieving arch shall be built over it with a 2-inch clearance on either side.

*Vertical soil, waste, and vent pipes.*

RULE 33. In all buildings where interior fixtures are connected directly with the drainage systems, and in all new buildings, there shall be a main vertical soil or venting pipe, which shall be not less than 4 inches in diameter.

*Location of soil, vent, and waste pipes.*

RULE 34. All soil, waste, and vent pipes shall be located inside of new buildings, and also in old buildings, except in old buildings where it is deemed inadvisable; then the pipes may be placed on the outside of the building, on the owner assuming all responsibility for the same in writing.

*Size of soil pipe.*

RULE 35. The size of soil pipes must be not less than those set forth in the following tables.

Horizontal lines are to be increased as fixtures are added, but verticals throughout their entire length are to have diameter given for the total number of fixtures which discharge into them. (The foregoing shall also apply to Rule 36.)

Vertical lines.	Number of water-closets.
<i>Inches.</i>	
4	1-12
5	13-25
6	26-40

If the building is 5 and less than 12 stories in height, the diameter shall be no less than 5 inches; if 12 stories or more, it shall be 6 inches in diameter.

Horizontal lines.	Number of water-closets.
<i>Inches.</i>	
4	1- 6
5	7-12
6	13-20

Small fixtures, in number not to exceed twice the number of water-closets, may discharge into the lines above specified without increasing their size.

*Size of horizontal and vertical lines of waste pipe. (See Rule 35.)*

**RULE 36.**

Horizontal and vertical lines.	Number of small fixtures.
<i>Inches.</i>	
1½	1
1½	2
2	3-5
2½	6-9
3	10-16
4	17-25
5	26-40
6	40-70

If the building is 5 to 10 stories in height, the vertical waste pipe shall be not less than 3 inches in diameter; if 11 to 16 stories, 4 inches; 17 to 21 stories, 5 inches; over 21 stories, 6 inches in diameter.

*Branch waste pipes.*

**RULE 37.** Waste pipes from washbasins, sinks, bathtubs, and urinals shall be not less than 1½ inches in diameter, and wash-tray waste pipes not less than 1½ inches in diameter; where they set in a range of three or more, the waste pipe shall be not less than 2 inches in diameter.

*Material of main drain, soil, waste, and vent pipes.*

**RULE 38.** All main drain, soil, waste, and ventilating pipes shall be of plain cast iron, galvanized lap-welded wrought iron, galvanized steel, or brass pipe.

*Lead waste pipes.*

**RULE 39.** Lead waste pipes may be used for short branches on horizontal lines and for vent connections that are 2 inches or less in diameter, and shall have not less than the following weight:

Diameter.	Weight per foot.
<i>Inches.</i>	<i>Lbs. Ozs.</i>
1	2 0
1½	2 8
1½	3 8
2	4 0

*Waste pipes not connected directly.*

**RULE 40.** Where a separate line of waste pipe is used in old buildings not connected directly with the drainage system, it shall also be carried 2 feet above the highest part of the building or contiguous property, and the fixtures trapped, unless otherwise permitted by the board of health. Such waste pipes shall be discharged directly into a properly trapped cesspool located under the end of said waste pipe. In no case shall a waste pipe be connected with a rain-water conductor.

*Where no sewer is accessible.*

**RULE 41.** Where there is no sewer accessible the drainage of all fixtures (except water-closets), together with surface inlets and rain-water conductors, shall be drained separately to the curb line where practicable by drain pipes not less than 4 inches in diameter and discharge into the public gutter, unless otherwise permitted by the board of health.



*Waste pipes from refrigerators.*

RULE 42. No waste pipes from a refrigerator or other receptacle in which provisions are kept or stored shall be connected with any drain, soil, or other waste pipe, but shall be discharged into an open water supplied fixture, properly tapped. A refrigerator waste pipe shall be trapped and so arranged as to admit of frequent flushing, and shall be as short as possible.

*Waste pipes from filters and gas engines, etc.*

RULE 43. The discharge of waste pipes from water filters, gas engines, soda-water fountains, air compressors, or vacuum cleaners, shall not be connected directly with any drain, soil, or other waste pipes. They shall be discharged into an open fixture, properly trapped.

*Safe waste pipes.*

RULE 44. All drip or waste pipes from safe linings under fixtures shall be by a special pipe run to an open sink, outside of the house or to some conspicuous point, and be provided with a flap valve on the end of the pipe.

In no case shall any such pipe be connected with a drain, soil, or waste pipe.

*Overflows from tanks.*

RULE 45. The overflow pipe from a house supply tank shall be discharged on the roof where possible, and in such cases shall be brought down to within 6 inches of the roof, or it must discharge over a properly trapped water supplied fixture having a waste pipe equal at least to the overflow pipe. Emptying pipes from tanks shall be discharged in the same manner as required for overflow pipes, or they may be connected with the overflow pipe.

The overflow from water-closet tanks may discharge into the bowl of the closet.

In no case shall an overflow pipe be connected with any drain, soil or waste pipe.

*Antisiphon pipes.*

RULE 46. All antisiphon vent-pipe lines and main branches shall be plain cast iron, galvanized wrought iron, galvanized steel or brass pipe.

All traps shall be protected from syphonage, where antisiphon pipes are used; the main and branch vent pipes shall be increased in size as fixtures are added, as follows:

Diameters.	Maximum length.	Number and size of trap.
<i>Inches.</i>	<i>Feet.</i>	
1½	25	1-2 traps, 1½ or 4 inches.
2	50	1-5 traps, 3 or 4 inches.
2½	75	6-9 traps, 3 or 4 inches.
3	100	10-15 traps, 3 or 4 inches.
4	150	16-25 traps, 3 or 4 inches.
5	200	26-40 traps, 3 or 4 inches.
6	250	41-60 traps, 3 or 4 inches.

Four traps of 1½ inches in diameter shall be considered equal to one 4-inch trap.

*Vent and antisiphon pipes for traps.*

RULE 47. Vent or antisiphon pipes shall be connected to the side of the waste pipe as near the trap as practicable; water-closets and slop sinks having earthenware traps shall have the connection of vent with the branch soil or waste pipe. Branch vent pipes must be so constructed as to prevent obstruction.

*Connection of vent pipes.*

RULE 48. Vent or antisiphon pipes shall be extended through the roof or may be connected to the adjoining soil or waste pipes above the highest fixture, providing said soil or waste pipe is not more than 6 feet distant, or there are not fixtures on more than 6 floors.

Where the vent is connected to the soil or waste pipe the said soil pipe shall be increased 1 inch in diameter from the junction, except where the soil pipe is 4 inches or more in diameter and the vent pipe is 2 inches or less in diameter.

*Offsets on vent lines.*

RULE 49. All offsets must be made at an angle of no less than 45° to the horizontal, and all lines must be connected at the bottom with a soil or waste pipe, or the drain, in such a manner as to prevent the accumulation of rust scale. Branch vents must be kept above the top of all connecting fixtures, to prevent the use of the vent pipes as soil or waste pipes.

*Ventilation of branch or horizontal pipes.*

RULE 50. Every branch or horizontal soil or waste pipe to which a group of two or more fixtures are to be connected, and every branch line of horizontal soil pipe 8 feet or more in length to which a water-closet is to be connected, or a waste pipe 12 feet or more in length to which is to be connected a fixture, shall be ventilated either by extending said soil or waste pipe to at least 2 feet above the highest part of the roof or contiguous property, or by extending said soil to waste and connecting it with the main soil pipe above the highest fixture, or by ventilating or anti-siphon pipe, as provided for in rules Nos. 46, 47 and 48.

*Flues for vents.*

RULE 51. No brick, sheet metal, or earthenware flue or chimney flue shall be used as a sewer ventilator or to ventilate any trap, drain, soil, or waste pipe.

*All new buildings to have vent pipes.*

RULE 52. The drainage system of all new buildings, whether connected with a sewer, well, or discharged on the surface, shall be provided with a ventilating or soil pipe extending to at least 2 feet above the highest part of the roof of the building or contiguous property, not less than 4 inches in diameter.

*Materials and workmanship.*

RULE 53. All materials shall be of good quality, free from defects, and all work must be executed in a thorough and workmanlike manner.

*Cast-iron pipes.*

RULE 54. All cast-iron pipes and fittings must be uncoated, sound, cylindrical, and smooth, free from cracks, sand holes, and other defects, of a uniform thickness, and of full interior diameter as specified, and shall conform to the following relative weights:

	Weight per foot.	
	Stand- ard.	Extra heavy.
	Pounds.	Pounds.
2-inch pipe.....	4	5½
3-inch pipe.....	6	9½
4-inch pipe.....	9	13
5-inch pipe.....	12	17
6-inch pipe.....	15	20
7-inch pipe.....	20	27
8-inch pipe.....	25	37

All cast-iron pipes and fittings shall have the name of the manufacturer, size, and weight per foot cast on the exterior surface directly back of the hub of each length or section of pipe in characters not less than one-half inch in length.

*Wrought-iron and steel pipes and fittings.*

RULE 55. All wrought-iron and steel pipes must be lap-welded, properly tested by the manufacturer, and be equal in quality to "Standard."

No uncoated or plain black wrought-iron or steel pipe will be permitted.

Wrought-iron and steel pipe must be galvanized, and each length must have the weight and maker's name stamped on it. Fittings for vent pipes of wrought iron or steel may be the ordinary cast or malleable steam or water fittings.

Fittings for waste or soil pipes shall be special heavy cast iron recessed and threaded drainage fittings, with smooth interior waterway, and threads tapped so as to give a uniform grade to branches at least one-fourth inch per foot. All fittings for wrought-iron or steel pipe must be galvanized.

All joints to be screw joints, made up with red lead or other substance approved by the board of health, and the burr formed in cutting must be carefully reamed out.

*Weight and thickness of wrought-iron and steel pipe.*

RULE 56. Wrought-iron and steel pipe shall be of full interior diameter, not less than the average thickness and weight set forth in the following table:

Diameter.	Thickness.	Weight per linear foot.
<i>Inches.</i>	<i>Inch.</i>	<i>Pounds.</i>
1½	0.145	2.68
2	.154	3.61
2½	.204	5.74
3	.217	7.54
3½	.226	9.00
4	.237	10.66
4½	.246	12.49
5	.259	14.50
6	.280	18.76
7	.301	23.27
8	.322	28.16
9	.344	32.70
10	.366	40.00
11	.375	45.00
12	.375	49.00

*Brass pipe.*

RULE 57. All brass pipes used for soil, waste, vent pipes, and solder nipples must be thoroughly annealed seamless drawn brass tubing of "Standard" iron-pipe gauge with the exception of such brass pipes as may be used for overflows and waste pipes from bathtubs, between the trap and the tub, waste pipes from washtubs, standing waste pipes and traps of lavatories and sinks, from the floor or walls to the fixture, which may be of a gauge less in thickness than iron-pipe gauge, but in no case shall the walls of the pipe be less in thickness than No. 17 of Brown & Sharpe gauge. When brass pipes and traps are used, the walls of which are less in thickness than iron-pipe gauge, they shall have the number of the gauge stamped into the metal for inspection.

In the absence of the number of the gauge being stamped on said pipes and traps, it shall be deemed sufficient cause for its condemnation and the requiring of its removal from the work.

Threaded connections on brass pipe must be of the same size as iron pipe threads for same size of pipe and be tapered. Connections on brass pipe and between brass pipe and traps on iron pipe must not be made with slip joints or couplings. Nor shall any slip joint or coupling be used for a connection on the sewer side of any trap. The following average thickness and weights per linear foot of full interior diameter will be required for brass pipe:

Diameter.	Thickness.	Weight per linear foot.
<i>Inches.</i>	<i>Inch.</i>	<i>Pounds.</i>
1½	0.145	2.84
2	.154	3.82
2½	.204	6.08
3	.217	7.93
3½	.226	9.54
4	.237	11.29
4½	.246	13.08
5	.259	15.37
6	.280	19.88

*Air inlets.*

RULE 58. There shall be an air inlet for fresh air entering the drain just inside the water seal of the main trap, and also at the rear end of the system when the vertical soil or vent pipe is located in the central part of the building and the main air inlet is deemed insufficient to ventilate the entire system.

*Where rear air inlets are not to be used.*

RULE 59. No air inlet shall be used at the rear end of a system of drainage when a water-closet is connected with a drain pipe and located in the cellar or basement, in the rear of a soil or vent pipe which extends to the roof. In such cases, in lieu of an air inlet, a vent pipe shall be extended to the roof at least 4 inches in diameter, as provided for vertical soil and vent pipes.

*Location of air inlets.*

RULE 60. Air inlets shall lead to the outer air and open at a convenient point; if located on the footway in the front of the building they shall be located at the curb line, and rear air inlets shall be located at a point at least 10 feet from the building. They shall have a perforated cover, having openings at least three-fourths of the diameter of the pipe.

If they are located on lawns or grass plots, they shall extend not less than 6 nor more than 15 inches above the surface of the ground and be protected by a return bend or a cowl securely fastened with bolts.

*Size of air inlets.*

RULE 61. Air inlets shall be of the same size as the drain up to 4 inches for 5 and 6 inch drains; they must not be less than 4 inches in diameter. For 8-inch drains not less than 6 inches or its equivalent, and for larger drains not less than 8 inches in diameter or its equivalent, unless otherwise permitted by the board of health.

*Air inlets not to open.*

RULE 62. In no case shall an air inlet open within 10 feet of any cold-air intake for a heater, window, shaft ventilating a basement or cellar, nor in front of doorsteps.

*Test.*

RULE 63. There shall be a test of atmospheric pressure of not less than 3 pounds to the square inch applied to the drainage system, including all soil, drain, vent, antisiphon pipes, and rain-water conductors inside of new buildings and of the new work in alterations or additions to drainage systems in old buildings, when alterations or additions are made to said systems, if, in the judgment of the health authorities, it is deemed necessary for the protection of health, and all defects discovered by this test shall be repaired at the owner's expense when so directed by the said health authorities. Said test shall extend to all drain pipes to a point at least 5 feet beyond foundation walls, excepting the pipe extending through the front foundation toward the sewer if the main trap is at the curb line and the clean-out or testing fitting is close to the inside of the said front foundation wall.

*Water test.*

RULE 64. Where it is considered impracticable to apply the air test, a water test may be applied to the horizontal lines of drains by special permission of the board of health, providing the pipe so tested is exposed to view in all its parts until after the test has been approved by the inspector.

The test shall be under a head of water at least 6 feet above all parts of the work to be tested, including all joints and connections.

*Plugs for testing.*

RULE 65. Openings in drain pipes shall be stopped for testing by a proper expansion plug, screw, cap, or plug. The use of plaster of Paris or any similar substance for this purpose is prohibited.

The material and labor for testing shall be furnished by the master plumber and the test applied by him or his representative in the presence of a house-drainage inspector.

*Fixtures not to be connected before test.*

RULE 66. No fixture shall be connected with a drainage system or any part thereof which requires testing under these rules until the test has been applied and approved by the inspector of house drainage.

*Defects.*

RULE 67. Defective materials and drainage work poorly constructed and unworkmanlike in manner, or which does not conform to these rules and regulations, shall be removed by the master plumber when condemned by the inspector of house drainage.

No cement, wax, grease, paraffin, plaster, sal ammoniac, sand, or other improper substance shall be used about any of the drainage system, and the presence of any foreign substance about a joint or any part of a drainage system shall be sufficient cause for condemning such joint or part of said system. Any split fittings, hubs, defective material not as specified in these rules and regulations which shall have been condemned by the inspector shall be removed from the work and not used again.

*Pipes not easily accessible.*

RULE 68. The drain, soil, and waste pipes and traps shall, if practicable, be exposed to view for the ready inspection at all times, and for convenience in repairing; when they are not easily accessible, extra-heavy pipes shall be used at the discretion of the bureau of health.

*Inspection.*

RULE 69. No drainage work shall be covered or concealed in any way until after it has been examined and approved by a house-drainage inspector.

Notice must be sent to the bureau of health in writing when the work is sufficiently advanced for inspection, giving location of property plan number, and character of work to be inspected, over the signature of the master plumber.

Immediately on the completion of the work application for final inspection must be made.

When work is ready for inspection, the plumbing contractor shall make such arrangements as will enable the proper officer to reach all parts of the building easily and readily, and also have present the proper apparatus and appliances for making tests and furnish such assistance as may be necessary to a proper application of same.

*Delinquent list.*

RULE 70. Failure on the part of a master plumber to make application for the inspection of any drainage work installed by him, application for final inspection or for the violation of any of the rules and regulations of the board of health governing house drainage, and failure to correct the fault after notification, shall be deemed sufficient cause to place the name of such master plumber on the delinquent list until he has complied with said regulations and rules.

Any attempt on the part of the master plumber or plumbers to construct or alter a system of drainage or any part thereof during the time his or their names appear on said delinquent list will subject him or them to prosecution.

*Wiped solder joints.*

RULE 71. All connections between lead pipes and lead or brass pipes, or between bends or traps and ferrules, shall be round, wiped solder joints. In no case will bit or cup joints be permitted.

*Joints on cast, wrought iron, steel or brass pipes.*

RULE 72. All joints on cast-iron pipe shall be made with picked oakum and molten lead, thoroughly caulked and make gas tight, 12 ounces of soft pig lead shall be used for each joint for each inch in the diameter of the pipe.

All joints in wrought iron, steel or brass pipes shall be screwed joints, made up with a paste of red lead or other substance as may be approved by the board of health, and made gas tight.

*Connections with earthenware traps and lead bends.*

RULE 73. Connections with earthenware traps and lead bends shall be by a heavy cast-brass floor plate one-fourth inch in the thickness fastened to the floor with screws or bolts, and soldered to the lead bend; the floor plate bolted to the flange of the traps and the joint made gas tight by a pure rubber gasket of not less than one-fourth inch thickness with one-eighth inch corrugation, three-fourths inch in width, or by a paste of proper consistency of red or white lead.

*Lead bends and traps.*

RULE 74. Lead bends and traps for water-closets and slop hoppers shall be not less than one-eighth inch in thickness; all other lead traps shall conform in thickness to the lead waste pipe to which they are to be attached.

The name of the manufacturer and the weight per foot shall be on each lead bend and trap.

*Brass ferrules and solder nipples.*

RULE 75. Cast brass ferrules and solder nipples shall be one-eighth inch in thickness and of full diameter, as specified. Brass pipe used for solder nipples shall be iron pipe gauge as specified in rule 57. ■

*Traps.*

RULE 76. No form of trap shall be used unless it has been approved by the board of health.

Every fixture shall be separately and effectually trapped by a water-sealing trap placed as near the fixture outlet as possible.

A set of washtubs or trays only may be connected with one trap.

The discharge from a fixture must not pass through more than one trap before reaching the house drain.

Traps shall not be more than one size larger than the waste pipe to which they are attached. All traps must be well supported and set true with respect to their water levels. Vent horns on earthenware traps are prohibited. Traps that depend on interior partitions for a seal, except earthenware ones, are prohibited.

All exposed or accessible traps, except water-closet traps, must have brass trap screws for cleaning.

All iron traps for house drain, yard and other drains, and rain-water conductors must have handholes, cleanouts of full size of the traps when same is less than 5 inches.

Traps for rain-water conductors shall have a water seal of not less than 5 inches.

Iron traps for rain-water conductors, areas, floor, and other drains shall be not less than 3 inches in diameter.

Traps for bath tubs must have cleanouts exposed on the floor of bath rooms. The body of such traps shall be not less than 2½ inches in diameter, and the cleanout must be protected by a water seal of not less than 1½ inches in depth.

*Strainers.*

RULE 77. All fixtures other than water-closets and urinals must have strong metallic strainers, or bars over the outside to prevent obstruction of the waste pipe.

Strainers for cesspools shall have openings equal in area to not less than three-fourths the area of the drainpipe to which cesspool connects.

*Water-closets.*

RULE 78. For all sewer-connected buildings occupied or to be occupied there must be at least one water-closet, and there must be an additional water-closet for every 15 occupants or fractional part thereof.

*Water-closets in lodging houses.*

RULE 79. In lodging houses there shall be one water-closet for every 15 single beds or accommodations for every 15 lodgers or fractional part thereof, together with sufficient urinal accommodations.



*Water-closets not to be supplied from supply pipes.*

RULE 80. No water-closet of any description shall be supplied with water or flushed directly from the water-supply pipes.

*Water-closets supplied with water from tanks.*

RULE 81. All water-closets of every description shall be supplied with water from special tanks or cisterns, which shall hold not less than 8 gallons of water when up to the level of the overflow pipe for each closet supplied, except automatic or siphon tanks, which shall hold not less than 5 gallons of water for each closet supplied. The water in said tanks shall not be used for any other purpose.

*Flushing rim bowls, no inclosures, etc.*

RULE 82. All water-closets must have flushing rim bowls, and all plumbing fixtures must be set open and free from all inclosing woodwork. Where water-closets will not support a rim seat, the seat must be supported on legs of galvanized iron, or noncorrosive material, and a drip tray, enameled on both sides, secured in place, shall be used.

*Low-down water-closets.*

RULE 83. Low-down tank water-closets shall be of siphon pattern.

*Types of water-closets prohibited.*

RULE 84. Pan, valve, plunger, offset washout, and other water-closets having an unventilated space, or whose walls are not thoroughly washed at each discharge, are prohibited.

*Latrines, etc.*

RULE 85. Latrines, range, trough, long-hopper water-closets, and similar appliances will not be permitted inside of a building. Where they are used in a special building, outside of the building proper, they shall be iron enameled inside and outside, and supplied and flushed with water from special reservoirs, and not located within 20 feet of a building when practicable.

*Floors impervious to moisture.*

RULE 86. In tenement houses, where two or more closets are in a group, lodging houses, factories, workshops, saloons, public buildings, and in all places where water-closets and urinals are for public use, the floor of the entire toilet room in which water-closets and urinals are located, and side walls to a height of at least 16 inches from the floor, except at the door, must be made waterproof with asphalt, cement, tile, slate, or other material impervious to moisture, approved by the board of health.

*Water-closets not to be located.*

RULE 87. Water-closets must not be located in the sleeping apartments nor in any room where food is prepared for human consumption of any building, nor in any room or apartment which has not direct communication with the external air, either by a window or air shaft, having an area to the open air of at least 4 square feet.

Hopper water-closets shall not be located within 8 feet of any building when practicable, nor have any opening whatever directly communicating with any building or inclosed shed, frame, or otherwise.

No water-closet accommodations for a tenement or lodging house shall be located in the cellar, basement, or under sidewalk.

*Yard water-closets.*

RULE 88. When water-closets are placed in the yard they shall be so arranged as to be adequately flushed from a reservoir; their water supply pipes shall be protected from freezing by placing them in a pit at least 3½ feet below the surface of the ground; the walls of said pit shall be of brick or stone, not less than 9 inches thick, laid in cement mortar.

The waste water from the stopcock or valve shall be conveyed to the drain pipe through a three-eighths inch lead pipe, properly connected.

*Inclosure of yard water-closets.*

RULE 89. The inclosure of yard water-closets shall be ventilated by slatted openings or movable sash windows, and there shall be a trap door in the floor of sufficient size for access to the pit. The door shall open to the outer air. In no case shall there be any communication directly between the water-closet inclosure and the building proper, or inclosed shed, frame, or otherwise.

*Ventilation of interior water-closet apartments.*

RULE 90. In all buildings where water-closet apartments are partitioned off from a room used for other purposes the outside partitions of such apartments shall extend up to the ceilings or be ceiled over, and these partitions must be to all intents and purposes air tight.

The outside partition must include a window, opening to the outer air on the lot whereon the building is situated or on the street, or it shall be ventilated by an air shaft opening to the outer air, having an area of at least 4 square feet. Where there is more than one water-closet apartment having an opening into an air shaft the said shaft shall have an area equal to 4 square feet of area for each water-closet apartment, unless otherwise permitted by the board of health.

Interior partitions of a water-closet apartment shall be dwarf partitions.

Where it is necessary to properly light such apartments the upper part of the outside partition shall be made of glass. This rule shall also apply to the apartments for urinals.

*Water supply for fixtures.*

RULE 91. All water-closets and other plumbing fixtures must be provided with a sufficient supply of water for flushing to keep them in a proper and cleanly condition.

*House supply tanks.*

RULE 92. House supply tanks must be covered so as to exclude dust, and must be so located as to prevent the water from being contaminated by gas and odors from plumbing fixtures. Tanks must be of wood, iron, or wood lined with tinned and planished copper.

Tanks must be supported as directed and approved by the building inspectors.

*Water-closet supply tanks.*

RULE 93. A group of water-closets and urinals may be supplied from one tank, but water-closets and urinals on different floors shall not be flushed from one tank, except where a separate valve device is used on the flushing pipe of each water-closet; said device shall insure a sufficient water supply and not be subject to syphonic action.

But in no case shall such valve device be used on water-supply pipes connected directly with the street main.

The flushing pipe of each and every water-closet when fitted with a valve device shall be provided with a separate stopcock or valve of proper size.

Tanks or cisterns shall be of such capacity as to insure at all times a sufficient water supply for water-closets and urinals, and the water from said tanks or cisterns shall not be used for any other purpose.

*Tanks prohibited.*

RULE 94. Plain and painted iron tanks or cisterns for water-closets and urinals are prohibited.

Copper lining for water-closet and urinal tanks or cisterns shall not be less than 12-ounce copper, and the weight must be stamped in the metal at the top of the tank.

*Flushing pipes.*

RULE 95. The flushing pipes for water-closets shall be not less than 1½ inches in diameter, and the flush couplings must be the full size of the flush pipe.

*Replacing water-closets.*

RULE 96. Whenever a water-closet of the prohibited type is replaced the reconstruction of adjacent small fixture wastes and vents required to bring them into conformity with these rules and regulations shall be performed, and the soil stack also extended at least 2 feet above the highest part of the building or contiguous property.

If a water-closet is placed on a soil pipe which has been or is also used as a rain-water conductor, or any additional connection is made to such a soil pipe, then the rain water shall be diverted from such soil pipe and carried to the house drain by a proper independent pipe and trapped as provided for rain-water conductors, and the soil pipe extended above the roof as required for soil pipes.

#### *Urinals.*

**RULE 97.** All urinals must be constructed of materials impervious to moisture that will not corrode under the action of urine. The floors and walls of urinal apartments must be lined with similar noncorrosive and nonabsorbent material.

Iron trough urinals must be enameled iron inside and outside; no plain or painted iron urinals will be permitted.

Urinals inside of a building must be flushed by a special tank or cistern, the flush pipe of which is not less than 1 inch in diameter.

#### *Rain-water conductors.*

**RULE 98.** All buildings shall be kept provided with proper metallic leaders for conducting water from the roofs in such manner as shall protect the walls and foundations of said building from injury. In no case shall the water from said leaders be allowed to flow upon the sidewalk, but the same shall be conducted by a pipe or pipes to the sewer. If there is no sewer in the street upon which said buildings front, then the water from said leaders shall be conducted by proper pipe or pipes below the surface of the sidewalk to the street gutter.

Inside leaders must be constructed of cast iron, wrought iron, or steel, with roof connections made gas and water tight by means of a heavy lead or copper-drawn tubing, wiped or soldered to a brass ferrule, or nipple calked, or screwed into the pipe. The tubing must extend at least 7 inches into iron leader pipe. Outside leaders may be sheet metal, but they must connect with the house drain by means of a cast-iron pipe extending vertically 5 feet above the grade level.

Rain-water conductors may be connected with the upright soil pipe of a hydrant cesspool, providing said cesspool does not receive the discharge from waste pipes.

Rain-water leaders must be trapped with cast-iron traps, so placed as to prevent freezing, and have a seal of at least 5 inches, except those placed inside of a building that are gas tight, and do not open near a window or air shaft, ventilating rooms. In such cases the trap may be omitted by special permission of the board of health.

Rain-water leaders must not be used as soil waste or vent pipe, nor shall such pipes be used as a leader.

#### *Steam exhaust and blow-off.*

**RULE 99.** No steam exhaust, boiler blow-off, drip pipe, hot water or other hot liquid shall discharge into a house drain inside of the main trap or a soil pipe; such discharge must first be to a condensing or cooling tank of proper dimensions and construction, and provided with a vapor pipe not less than 4 inches in diameter of wrought iron, with screw joints. The discharge pipe from the condensing tank shall connect with the house drain on the sewer side of the main trap, and be provided with such traps as may be necessary to prevent the ingress of sewer gas or air.

This rule shall not be construed to apply to ordinary boilers connected with a range of a dwelling, except that no sediment cock shall directly connect with the drain or waste pipe.

#### *Drainage of fixtures below sewer level.*

**RULE 100.** All fixtures in a basement below the level of the sewer shall discharge into a sump or receiving tank, made air tight, and ventilated by extending a vent pipe not less than 4 inches in diameter to a point at least 2 feet above the highest part of the building or contiguous property. And the contents of said sump or tank lifted and discharged into the drainage system by some approved method, or an improved ejector may be used to lift the sewage to the drainage system.

#### *Floor and subsoil drains.*

**RULE 101.** Floor and other drains in cellars will only be permitted when it can be shown to the bureau of health that it is absolutely necessary, and arrangements are made to maintain a permanent water seal, the drainage system is properly ventilated, and the branch pipe for floor drain provided with a back pressure valve. Subsoil or drains for draining cellars shall be constructed as follows: By a system of French

drains or field tile to a catch basin or receiving tank properly flagged or covered over, the outlet pipe shall be properly trapped and connected with the house drain, and be provided with a back pressure valve the required size with accessible cleanout.

If the catch basin is below sewer level, the contents shall be lifted by an approved method and discharged into the house drain.

Catch basins or receiving tanks for subsoil drainage shall have a ball cock attached to the water-supply pipes, in order to maintain a water seal up to the level of the outlet pipe, which shall be trapped by turning a bend down into the water of the basin or tank. A flap valve located in the bells of pipes will not be permitted.

*Area, yard, and hydrant drains.*

**RULE 102.** The yard of each lot must be provided with a cesspool for surface drainage, connected with the drainage system, and no surface water is permitted to drain to a surface watercourse by way of an alley or the highway, except in districts where adequate sewers are not provided.

Cesspools for the reception of discharge from surfaces, hydrants, and waste pipes shall be not less than 12 inches in diameter, and be trapped in a manner accessible for cleaning out.

Area drains when connected with the house drains shall have not less than 3-inch connections; they should be controlled by one trap (if possible, the rain-water trap), and must be provided with permanent metallic strainers.

*Sewage disposal.*

**RULE 103.** No plant or system for the disposal of sewage shall be constructed or maintained within the limits of the city of Philadelphia, either by means of Eroad irrigation, subsoil irrigation, wells, or otherwise, except that it is shown that the proposed system can be maintained without nuisance or danger to public health, and detailed plans of said system are submitted, approved, and permit issued by the bureau of health for its construction.

*Wells for sewage.*

**RULE 104.** In districts where the public-sewer system is unavailable and there is sufficient ground for the purpose, on the approval of the bureau of health a tight well may be used to receive the discharge of house sewage, which may be overflowed to an absorption well, providing there is no danger of contaminating a water supply well or spring and the soil is of an absorbent character, otherwise a tight well only will be permitted to receive the discharge of water-closets, and the waste from all other fixtures shall discharge to a surface watercourse as provided in rule 41.

*Construction and location of drainage wells.*

**RULE 105.** A tight well for drainage shall not be less than 4 feet in diameter by 10 feet deep in the clear, or its equivalent, lined with hard brick 9 inches thick, laid in cement mortar and made water-tight, and flagged or arched over.

An absorption or loose well shall be not less than the dimensions of the tight well, lined with dry brick or stone. Both tight and loose wells shall be provided with a 24-inch cast-iron cover and frame, and said wells shall not be located within 40 feet of any building when practicable, or within 2 feet of party lines.

*Privy vaults or cesspools.*

**RULE 106.** No privy vault or cesspools for sewage shall hereafter be constructed in any part of the city where a sewer is at all accessible, which shall be determined by the bureau of health; nor shall it be lawful to continue a privy vault or cesspool on any lot, piece, or parcel of ground abutting on or contiguous to any public sewer within the city limits. The bureau of health shall have power to issue notice, giving at least three months' time to discontinue the use of any cesspool and have it cleaned and filled up. No connection from any cesspool or privy vault shall be made with any sewer; nor shall any water-closet or house drain empty into a cesspool or privy vault.

*Constructing privy vaults or wells.*

**RULE 107.** Privy vaults or wells must be constructed as follows: Each building situated on an unsewered street must have a privy vault or well, not less than 4 feet in diameter and 10 feet deep in the clear, lined with hard brick 9 inches thick laid in cement mortar and made water-tight.

*Location of privy wells.*

RULE 108. Privy wells shall not be located within 2 feet of party lines or within 20 feet of a building when practicable, and before any privy vault or well or cesspool for drainage shall be constructed, application shall be made and permit issued for the same by the bureau of health.

*Abandoning of privy wells.*

RULE 109. When a privy vault or well is to be abandoned it must be cleaned by having its contents removed, and thoroughly disinfected by a licensed excavator, who shall notify the bureau of health the well has been cleaned to the bottom and apply for an inspection of the same; on the approval of a house-drainage inspector it shall be filled with fresh earth. In no case shall a privy well be filled until its contents have been entirely removed and it has been inspected and approved by the inspector.

*Pipes to be supported.*

RULE 110. All vertical pipe lines must be supported and at their base supported by a brick pier or heavy iron hanger from the cellar ceiling beams.

*Smoke or peppermint test.*

RULE 111. A smoke or peppermint test shall be applied to a drainage system by the plumber, in the presence of the inspector, when it is deemed necessary by the bureau of health. Where the peppermint test is used, two ounces of peppermint must be provided for each line up to 5 stories and basement in height, and for each additional 5 stories or fraction thereof 1 additional ounce of peppermint for each line must be provided.

*Fittings not to be used.*

RULE 112. Short quarter bends, double hubs, offsets less than an angle of 45° to the horizontal, are prohibited; saddle hubs will only be permitted to be used in old work by special permission of the bureau of health.

*Drilling and tapping.*

RULE 113. In old work, where the conditions are such that ample threads may be obtained, drilling and tapping is permitted.

*Wooden fixtures prohibited.*

RULE 114. Wooden bathtubs and wooden washtubs are prohibited. Wooden bathtubs lined with metal, formerly in use, shall not be installed in any other building other than that in which they were located originally.

*Main trap to be located in old work.*

RULE 115. When a soil stack is added, or any alteration or addition is made to a drainage system, and there is no main trap or air inlet on said system, such appliances shall be provided.

*Soil lines to be extended before testing.*

RULE 116. No test shall be made by the inspector of any drainage work until every vertical soil and ventilating pipe shall have been extended above the roof to the height required.

*Repairing of terra-cotta pipes, etc.*

RULE 117. No terra-cotta drain inside a building or within 5 feet of a foundation wall, when in a leaky or defective condition, shall be repaired or replaced to a greater length than 9 feet; otherwise, the entire terra-cotta pipe shall be removed and replaced with cast-iron pipe of the weights prescribed.

Where excavations are made which would leave terra-cotta pipe above ground or above cellar floor, such terra-cotta pipe shall be removed and pipe substituted as is required for new work.



*Slope.*

RULE 118. All drain and waste pipes must be run at uniform grade. Antisiphon and ventilating pipes, where not vertical, must have a contiguous slope to avoid collection of water by condensation or accumulation of rust scale.

*Submerged fixtures supplies.*

RULE 119. All fixtures and tanks which have their water supply at or near the bottom shall have check valves on the water supply close to the fixture or tank, in order to prevent the water from said fixture or tank being returned through the supply pipes.

*Terms used.*

RULE 120. The term "master plumber," as used in these rules, shall be taken to mean a person who has an established place of business and who, either as principal or as the representative of any person, firm, or corporation, represents himself as competent and qualified, and undertakes to construct, alter, or make additions, or who, for himself or for any person, firm, or corporation, undertakes to and does construct, alter, or make any additions to a system of house drainage.

The term "journeyman plumber," as contained in these rules, shall be taken to mean a plumber who is engaged in and working at the business of plumbing for and under the supervision of a master plumber.

The term "bona fide" place of business, as used in these rules, shall be taken to mean a place having a workroom or shop, equipped with the tools necessary and requisite for the proper installation of plumbing and drainage work, and has displayed on its front a sign as required by these rules, either with or without a showroom.

The term "private sewer" is applied to sewers that are not constructed by the bureau of surveys for the city of Philadelphia.

The term "street sewer" is applied to public sewers in the streets constructed by the bureau of surveys for the city of Philadelphia.

The term "house drain" is applied to the horizontal drain and its branches, extending to and connecting with the private sewer, public sewer, or cesspool.

The term "main drain" is applied to the main or principal line of drainpipe connected with a cesspool or sewer and to which branch drainpipes are connected.

The term "soil pipe" is applied to any vertical pipe, extending through the roof or not, which receives the discharge of one or more water-closets with or without other fixtures.

The term "waste pipe" is applied to any pipe receiving the discharge from any fixture except water-closets and also to any vertical pipe extending through the roof receiving the same character of discharge.

The term "vent and antisiphon pipes" are applied to any special pipe provided to ventilate the system of drainage and to prevent trap siphonage and back pressure.

The term "air inlet" is applied to a pipe connected with the drainpipes for the purpose of admitting fresh air from or near the surface of the ground.

*Disputes.*

RULE 121. In case of any dispute or difference of opinion existing between the bureau of health and any person, firm, or corporation, as aforesaid, regarding the construction of plumbing, house drainage, or cesspools, the same shall be submitted by either party to the director of the department of public health and charities, or the presiding officer of the bureau of health, who shall pass upon same, and whose findings therein, after hearing, shall be final and conclusive upon all parties.

*Penalty.*

RULE 122. Any person or persons who shall fail to comply with any of the provisions of the act of assembly governing house drainage, approved June 7, 1911, regarding the procuring of a license or certificate to engage in or work at the business of plumbing or house drainage shall be liable to a fine of not less than \$10 nor exceeding \$50 for each and every day he or they shall engage in or work at said business without first having obtained said certificate or license; and any person or persons who shall violate any of the rules, regulations, or requirements made by the board of health in accordance with the provisions of the act regarding the construction, reconstruction, or testing of plumbing, house drainage, or cesspools shall be liable, for every such offense,



to a fine of not less than \$10 nor more than \$50, which fines shall be recoverable before any alderman or police magistrate in said cities by summary proceedings and shall be sued for in the name of said cities and, when collected, shall be paid into the treasury thereof.

All fines and penalties imposed by the act are recoverable by summary proceedings before any police magistrate or justice of the peace in said cities, and all suits or actions at law instituted for the recovery thereof are to be in the name and for the use of the city within or against which offense is committed, and upon recovery thereof all such fines and penalties are to be paid to the city treasurer thereof. In default of the payment of any fine or penalty imposed by any police magistrate or justice of the peace under the provisions of the act the person or persons so offending may be committed to the jail, workhouse, or other penal institution of the county in which said city is situate for a period not exceeding 30 days. [Regulations board of health, adopted Oct. 21, 1911.]

# PLAGUE-PREVENTION WORK.

## PLAGUE-INFECTED SQUIRRELS FOUND.

During the week ended July 6, 1912, positive diagnosis was made of 147 plague-infected ground squirrels found in Alameda and Contra Costa Counties, Cal., as follows: Alameda County—June 20, 2 squirrels; July 1, 1 squirrel; July 2, 4 squirrels; July 3, 4 squirrels. Contra Costa County—June 19, 2 squirrels; June 20, 2 squirrels; June 25, 1 squirrel; June 29, 17 squirrels; July 1, 24 squirrels; July 2, 37 squirrels; July 3, 15 squirrels; July 5, 20 squirrels; July 6, 18 squirrels.

## DISTRIBUTION OF POISON.

In connection with the making and maintenance of a squirrel-free zone around the cities of California on San Francisco Bay, 4,005 acres of land in Alameda County were covered with poison during the week ended July 6, 1912.

## RECORD OF PLAGUE INFECTION.

Places	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number of rodents found infected since May, 1907.
<b>California:</b>				
<b>Cities—</b>				
San Francisco.....	Jan. 30, 1908.....	Oct. 23, 1908....	None.....	398 rats.
Oakland.....	Aug. 9, 1911.....	Dec. 1, 1908....	do.....	126 rats.
Berkeley.....	Aug. 27, 1907....	None.....	do.....	None.
Los Angeles.....	Aug. 11, 1908....	do.....	Aug. 21, 1908....	1 squirrel.
<b>Counties—</b>				
Alameda (exclusive of Oakland and Berkeley).	Sept. 26, 1909....	Wood rat, Oct. 17, 1909.	June 26, 1912....	226 squirrels and 1 wood rat.
Contra Costa.....	July 21, 1911....	None.....	June 28, 1912....	733 squirrels.
Fresno.....	None.....	do.....	Oct. 27, 1911....	1 squirrel.
Merced.....	do.....	do.....	July 13, 1911....	5 squirrels.
Monterey.....	do.....	do.....	Aug. 6, 1911....	6 squirrels.
San Benito.....	June 5, 1910.....	do.....	June 8, 1911....	22 squirrels.
San Joaquin.....	Sept. 18, 1911....	do.....	Aug. 26, 1911....	18 squirrels.
San Luis Obispo.....	None.....	do.....	Jan. 29, 1910....	1 squirrel.
Santa Clara.....	Aug. 23, 1910....	do.....	Oct. 5, 1910....	23 squirrels.
Santa Cruz.....	None.....	do.....	May 17, 1910....	3 squirrels.
Stanislaus.....	do.....	do.....	June 2, 1911....	13 squirrels.
<b>Louisiana:</b>				
<b>City—</b>				
New Orleans.....	do.....	July 27, 1912....	None.....	1 rat.
<b>Washington:</b>				
<b>City—</b>				
Seattle.....	Oct. 30, 1907....	Sept. 21, 1911....	None.....	25 rats.

## RATS COLLECTED AND EXAMINED FOR PLAGUE INFECTION.

WEEK ENDED JULY 6, 1912.

Places.	Found dead.	Total collected.	Examined.	Found infected.
California:				
Cities—				
Berkeley.....		1 152	71	None.
Oakland.....	17	595	330	None.
San Francisco.....	95	1,757	1,503	None.
Washington:				
City—				
Seattle.....		801	766	.....

<sup>1</sup> Identified: *Mus norvegicus*, 111, *Mus musculus*, 41.<sup>2</sup> Identified: *Mus norvegicus*, 502, *Mus musculus*, 93.<sup>3</sup> These rats were taken from the steamer *Nippon Maru* after fumigation.<sup>4</sup> Identified: *Mus norvegicus*, 1,025, *Mus rattus*, 246, *Mus musculus*, 253, *Mus alexandrinus*, 233.

## SQUIRRELS COLLECTED AND EXAMINED FOR PLAGUE INFECTION.

During the week ended July 6, 1912, 91 squirrels from Alameda County, 1,029 from Contra Costa County, and 12 from Stanislaus County, Cal., were examined for plague infection. Eleven from Alameda County and 136 from Contra Costa County were found infected.

## CEREBROSPINAL MENINGITIS.

## CASES AND DEATHS REPORTED BY CITY HEALTH AUTHORITIES FOR THE WEEK ENDED JULY 20, 1912.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Boston, Mass.....	2	.....	Los Angeles, Cal.....	3	1
Chicago, Ill.....	1	.....	New York, N. Y.....	13	4
Cleveland, Ohio.....	.....	1	Orange, N. J.....	1	.....
Duluth, Minn.....	1	1	Philadelphia, Pa.....	1	1
Haverhill, Mass.....	1	.....	Pittsburgh, Pa.....	.....	1
Kalamazoo, Mich.....	1	1	St. Louis, Mo.....	2	.....

## ERYSIPELAS.

## CASES AND DEATHS REPORTED BY CITY HEALTH AUTHORITIES FOR THE WEEK ENDED JULY 20, 1912.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Cleveland, Ohio.....	1	.....	Reading, Pa.....	1	.....
Harrisburg, Pa.....	1	.....	Saginaw, Mich.....	.....	1
Los Angeles, Cal.....	3	.....	Seattle, Wash.....	1	.....
Milwaukee, Wis.....	3	.....	St. Louis, Mo.....	2	.....
New York, N. Y.....	16	2	San Francisco, Cal.....	4	.....
Oakland, Cal.....	.....	1	Wheeling, W. Va.....	1	.....
Philadelphia, Pa.....	4	1	Yonkers, N. Y.....	.....	1
Pittsburgh, Pa.....	3	.....			

## LEPROSY.

During the week ended July 20, 1912, 1 case of leprosy was reported at San Francisco, Cal.

## PELLAGRA.

During the week ended July 20, 1912, pellagra was reported as follows: Baltimore, Md., 1 death; Houston, Tex., 1 death; Pasadena, Cal., 1 death; Richmond, Va., 1 case; Wilmington, N. C., 1 case.

## PNEUMONIA.

CASES AND DEATHS REPORTED BY CITY HEALTH AUTHORITIES  
FOR THE WEEK ENDED JULY 20, 1912.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Baltimore, Md.....		6	Newark, N. J.....		1
Boston, Mass.....		14	New Bedford, Mass.....		4
Bridgeport, Conn.....		1	New Orleans, La.....		6
Buffalo, N. Y.....		6	New York, N. Y.....		29
Butte, Mont.....		2	Northampton, Mass.....		1
Cambridge, Mass.....		2	Oakland, Cal.....		10
Chicago, Ill.....	11	53	Oklahoma City, Okla.....		1
Cincinnati, Ohio.....		1	Passaic, N. J.....		1
Cleveland, Ohio.....	7	5	Peoria, Ill.....		1
Cumberland, Md.....		1	Philadelphia, Pa.....	20	15
Dayton, Ohio.....		5	Pittsburgh, Pa.....	4	22
Duluth, Minn.....		1	Roanoke, Va.....		1
Elizabeth, N. J.....		2	Saginaw, Mich.....		1
Evansville, Ind.....		1	San Francisco, Cal.....	6	
Fall River, Mass.....	1	1	Schenectady, N. Y.....	1	1
Hartford, Conn.....		1	Seattle, Wash.....		3
Kalamazoo, Mich.....	1		Springfield, Mass.....		1
Lawrence, Mass.....		1	Toledo, Ohio.....		1
Los Angeles, Cal.....	2	9	Washington, D. C.....		3
Lowell, Mass.....		2	Wilkes-Barre, Pa.....		1
Lynchburg, Va.....		3	Wilkinsburg, Pa.....	1	
Medford, Mass.....		1	Wilmington, Del.....		1
Nashville, Tenn.....		1			

## POLIOMYELITIS.

CASES AND DEATHS REPORTED BY CITY HEALTH AUTHORITIES  
FOR THE WEEK ENDED JULY 20, 1912.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Baltimore, Md.....	1	2	Los Angeles, Cal.....	36	4
Boston, Mass.....		1	New York, N. Y.....	10	1
Cleveland, Ohio.....	1		Philadelphia, Pa.....	1	
Dayton, Ohio.....		1	Providence, R. I.....	1	
Jersey City, N. J.....		1	Springfield, Mass.....	2	1

## BUFFALO, N. Y.

Dr. Eugene H. Porter, New York State Commissioner of Health, reported August 6 that poliomyelitis was epidemic in Buffalo, where to August 3 there had been 86 cases with 6 deaths.

## RABIES.

During the week ended July 20, 1912, rabies was reported as follows: Los Angeles, Cal., 1 case and 1 death; San Francisco, Cal., 1 case and 1 death.

## TETANUS.

CASES AND DEATHS REPORTED BY CITY HEALTH AUTHORITIES  
FOR THE WEEK ENDED JULY 20, 1912.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Dayton, Ohio.....		1	Peoria, Ill.....		1
Fort Wayne, Ind.....		1	Philadelphia, Pa.....	1	2
Nanticoke, Pa.....	1	1	Schenectady, N. Y.....		1
Orange, N. J.....	1	1			

## SMALLPOX IN THE UNITED STATES.

## STATE REPORTS.

This table is compiled from reports made to the Bureau of the Public Health and Marine-Hospital Service by the health authorities of certain States, and shows the number of cases of smallpox notified to the authorities in these States.

The following States report monthly: Arizona, California, Colorado, Connecticut, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Mississippi, Montana, New Jersey, New York, North Carolina, North Dakota, Oklahoma, Ohio, Oregon, Pennsylvania, South Dakota, Texas, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming.

Florida, Minnesota, and the District of Columbia report by weeks.

## Reports Received During Week Ended Aug. 9, 1912.

Places.	Date.	Cases.	Deaths.	Remarks.
<b>California:</b>				
Counties—				
Alameda.....	June 1-30.....	1		
Butte.....	do.....	19		
Colusa.....	do.....	10		
Contra Costa.....	do.....	4		
Fresno.....	do.....	1		
Los Angeles.....	do.....	30		
Napa.....	do.....	1		
Riverside.....	do.....	5		
Sacramento.....	do.....	2		
San Diego.....	do.....	4		
San Francisco.....	do.....	29		
Sutter.....	do.....	1		
Tulare.....	do.....	4		
Total for State.....		111		
<b>New York:</b>				
Counties—				
Broome.....	June 1-30.....	7		
Cattaraugus.....	do.....	3		
Clinton.....	do.....	2		
Erie.....	do.....	2		
Franklin.....	do.....	1		
Niagara.....	do.....	5		
Rockland.....	do.....	1		
Westchester.....	do.....	3		
Total for State.....		24		
<b>South Dakota:</b>				
Counties—				
Aurora.....	June 1-30.....	2		
Bonhomme.....	do.....	2		
Brown.....	do.....	8		
Coddington.....	do.....	4		
Carson.....	do.....	2		
Fall River.....	do.....	1		
Walworth.....	do.....	7		
Yankton.....	do.....	1		
Total for State.....		27		
Grand total.....		162		

## CITY REPORTS.

Cases and Deaths Reported by City Health Authorities for the Week Ended July 20, 1912.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Braddock, Pa.	1	.....	New Orleans, La.	1	.....
Cleveland, Ohio.	2	.....	New York, N. Y.	2	.....
Columbus, Ohio.	1	.....	Niagara Falls, N. Y.	2	.....
Dayton, Ohio.	2	.....	Richmond, Va.	2	.....
Detroit, Mich.	2	.....	Roanoke, Va.	1	.....
Duluth, Minn.	1	.....	San Antonio, Tex.	1	.....
Fort Wayne, Ind.	1	.....	San Francisco, Cal.	1	.....
Hartford, Conn.	5	.....	Spokane, Wash.	3	.....
Kalamazoo, Mich.	1	.....	Superior, Wis.	1	.....
Los Angeles, Cal.	7	.....	Toledo, Ohio.	5	.....
Lowell, Mass.	1	.....	West Hoboken, N. J.	1	.....
Milwaukee, Wis.	1	.....	Wilmington, N. C.	1	.....

## MORBIDITY AND MORTALITY.

MORBIDITY AND MORTALITY TABLES, CITIES OF THE UNITED STATES, FOR WEEK ENDED JULY 20, 1912.

Cities.	Popu- lation, United States census 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Tuber- culosis.		Ty- phoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cities having over 500,000 inhabitants.												
Baltimore, Md.	558,485	239	11	20	4	66	28	27	1	1	1	1
Boston, Mass.	670,585	20	2	61	5	67	25	9	1	1	1	1
Chicago, Ill.	2,185,283	682	85	20	117	2	81	10	100	46	11	1
Cleveland, Ohio.	560,663	171	29	2	14	20	4	28	8	1	1	1
New York, N. Y.	4,766,883	1,309	159	14	346	10	116	4	397	151	64	14
Philadelphia, Pa.	1,549,008	500	33	3	8	1	28	1	115	58	28	7
Pittsburgh, Pa.	533,905	187	15	3	170	5	19	31	8	3	3	3
St. Louis, Mo.	687,029	213	11	1	4	1	5	32	15	11	5	5
Cities having from 300,000 to 500,000 inhabitants.												
Buffalo, N. Y.	423,715	5	1	132	4	6	17	10	5	1	1	1
Cincinnati, Ohio.	364,463	123	5	9	3	33	11	8	1	1	1	1
Detroit, Mich.	465,766	169	22	1	5	1	.....	.....	.....	.....	.....	.....
Los Angeles, Cal.	319,198	112	6	1	6	2	14	11	10	2	2	2
Milwaukee, Wis.	373,857	91	3	27	2	8	21	1	7	1	1	1
Newark, N. J.	347,469	93	12	5	2	2	34	4	6	3	3	3
New Orleans, La.	339,075	121	1	.....	7	31	26	3	.....	.....	.....	.....
San Francisco, Cal.	416,912	132	5	3	1	1	17	18	19	3	3	3
Washington, D. C.	331,069	133	3	27	.....	.....	22	20	6	2	2	2
Cities having from 200,000 to 300,000 inhabitants.												
Jersey City, N. J.	267,779	76	2	.....	1	3	4	5	.....	.....	.....	.....
Providence, R. I.	224,326	67	4	1	1	3	7	5	.....	.....	.....	.....
Seattle, Wash.	237,194	45	5	10	2	9	10	2	.....	.....	.....	.....
Cities having from 100,000 to 200,000 inhabitants.												
Bridgeport, Conn.	102,054	28	1	.....	2	1	6	2	.....	.....	.....	.....
Cambridge, Mass.	104,839	22	3	1	3	2	2	2	1	.....	.....	.....
Columbus, Ohio.	181,548	45	1	7	2	11	3	4	.....	.....	.....	.....
Dayton, Ohio.	116,577	38	1	3	.....	3	.....	.....	.....	.....	.....	.....
Fall River, Mass.	119,295	38	3	1	2	10	5	.....	.....	.....	.....	.....
Lowell, Mass.	106,294	31	8	8	1	2	5	1	1	.....	.....	.....
Nashville, Tenn.	110,364	35	.....	.....	.....	2	3	6	.....	.....	.....	.....
Oakland, Cal.	150,174	46	5	1	.....	4	1	1	1	1	.....	.....
Omaha, Nebr.	124,096	27	1	1	1	.....	.....	4	4	4	.....	.....
Richmond, Va.	127,628	57	1	2	.....	4	4	4	.....	.....	.....	.....
Spokane, Wash.	104,402	1	1	3	1	.....	.....	4	4	4	.....	.....
Toledo, Ohio.	168,497	40	1	1	19	1	2	8	6	.....	.....	.....
Worcester, Mass.	145,986	52	6	5	1	6	5	1	.....	.....	.....	.....



## MORBIDITY AND MORTALITY—Continued.

Weekly morbidity and mortality tables, cities of the United States, for week ended July 20, 1912—Continued.

Cities.	Popula- tion, United States census 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Tuber- culosis.		Ty- phoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cities having from 50,000 to 100,000 inhabitants.												
Altoona, Pa.	52,127	10	2						1	1		
Bayonne, N. J.	55,545	16	1		5	1				1		
Brockton, Mass.	56,878	11			2		1		2		1	
Camden, N. J.	94,538		7	1			1		10			
Duluth, Minn.	78,466		1				2		3	3		
Elizabeth, N. J.	73,409	22	2		1	1	1		5	1		
Erie, Pa.	66,525	17	6		13		2		1	2	2	
Evansville, Ind.	69,647	21		1	1		1		4	3	5	
Fort Wayne, Ind.	63,933	14	1						1		1	
Harrisburg, Pa.	64,186	6										
Hartford, Conn.	98,915	31		1	19	1	1			2	1	
Hoboken, N. J.	70,324		7	1	1				4	1		
Houston, Tex.	78,800	23								1		4
Johnstown, Pa.	55,482	19			6		1			2		
Kansas City, Kans.	82,331						1		1			
Lawrence, Mass.	85,892	24			2				1	1		
Lynn, Mass.	89,336	21	6		11		3		2	1		1
Manchester, N. H.	70,063	14	1		2				1	1		
New Bedford, Mass.	96,652	52	3		2				6	4		
Oklahoma City, Okla.	64,205	20	2		1						2	
Passaic, N. J.	54,773	24	1		17		1	1	4	3		
Pawtucket, R. I.	51,622			1								
Peoria, Ill.	66,950	16	2						2			
Reading, Pa.	96,071	19	2		14		6		8	2	3	1
Saginaw, Mich.	50,510	8	5	1	1						1	
San Antonio, Tex.	96,614	50	1				1			9	6	1
Schenectady, N. Y.	72,826	16			13				1	1	3	
South Bend, Ind.	53,684	8								1	1	
Springfield, Ill.	51,678	11	1	1			1		4			1
Springfield, Mass.	88,926	32					1		3	1	4	
Trenton, N. J.	96,815	42			1		1		6	3	3	
Wilkes-Barre, Pa.	67,105	25	1				1		3	2		
Wilmington, Del.	87,411	38								5		1
Yonkers, N. Y.	79,803	15	4		1		6	1		2	1	1
Cities having from 25,000 to 50,000 inhabitants.												
Atlantic City, N. J.	46,150	14									3	
Aurora, Ill.	29,807	10								1		
Berkeley, Cal.	40,434	3										
Binghamton, N. Y.	48,443	21							1	1		
Brookline, Mass.	27,792	2					1		2	1		
Butte, Mont.	39,165	16			1					1		
Chattanooga, Tenn.	44,604										8	
Chelsea, Mass.	32,452	9			2				4	1	1	
Chicopee, Mass.	25,401	11			3				2	4	1	
Danville, Ill.	27,871	5								2		
East Orange, N. J.	34,371		1		5				3		1	
Elmira, N. Y.	37,176	11			24						1	2
El Paso, Tex.	39,279	22								5	1	1
Everett, Mass.	33,484	5			15							
Fitchburg, Mass.	37,826	4	1				1		2		1	
Haverhill, Mass.	44,115				8				2		2	
Kalamazoo, Mich.	39,437	14					1		1	2	2	
Knoxville, Tenn.	36,346	10								1		
La Crosse, Wis.	30,417	9					1		1	1		
Lancaster, Pa.	47,227		1		2						3	
Lexington, Ky.	35,099	15									1	
Lima, Ohio.	30,508	7	2	1			1					
Lynchburg, Va.	29,494	16	2		2	1	2				3	
Malden, Mass.	44,404	9	1		18				2	1	1	
McKeesport, Pa.	42,694	10			3						2	
Montgomery, Ala.	38,136	16	1						1	3	1	
Newcastle, Pa.	36,280		3		3							
Newport, Ky.	30,309	8	1						1	1		
Newton, Mass.	39,806						1					
Niagara Falls, N. Y.	30,445	13	1		2							1
Norristown, Pa.	27,875	11			2				1	1		



**STATISTICAL REPORTS OF MORBIDITY AND MORTALITY, STATES  
OF THE UNITED STATES (Untabulated).**

MARYLAND.—Month of June, 1912. Population, 1,295,346. Total number of deaths from all causes 786, including diphtheria 4, tuberculosis 79, typhoid fever 3. Cases reported: Diphtheria 16, measles 156, scarlet fever 10, typhoid fever 51. Seven cases of typhoid fever occurred on the Potomac River watershed 1 case on the Susquehanna River watershed 1 case on the Gunpowder River watershed.

NEW JERSEY.—Month ended July 10, 1912. Population, 2,537,167. Total number of deaths from all causes 2,795, including diphtheria 31, measles 33, scarlet fever 13, tuberculosis 349, typhoid fever 19.

NORTH DAKOTA.—Month of June, 1912. Population, 577,056. Total number of deaths from all causes 293, including tuberculosis 1. Cases reported: Diphtheria 7, measles 26, scarlet fever 22, smallpox 29, tuberculosis 4, typhoid fever 5.

## FOREIGN AND INSULAR.

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### AUSTRIA.

#### Trieste—Plague Rats on Vessel.

A report from the American embassy at Vienna, Austria, July 11, states: On Friday, July 7, the sanitary commission of Trieste, on examination of the conditions on board the steamship *Africana*, chartered by the Austro-Americana Steamship Line, and but lately returned from Buenos Aires, discovered dead rats in the hold, which were shown by bacteriological examination to have died of bubonic plague. By order of the commission work on board was stopped at once and the vessel was towed from her pier into the harbor, where she will remain under quarantine until further orders. None of the crew has developed symptoms of the disease, but they will be kept under close observation.

### CHINA.

#### Hongkong—Plague.

Surg. Brown reports: During the week ended June 15, 126 cases of plague, with 104 deaths, and during the week ended June 22, 127 cases of plague, with 99 deaths, were reported in Hongkong.

### GREAT BRITAIN.

#### Liverpool—Case of Plague.

A seven-year-old boy sick with plague was sent to hospital July 26.

### GUATEMALA.

#### Sanitary Status of Ports and Inland Towns.

Acting Assistant Surgeon Ames reported July 4:

### LIVINGSTON.

Livingston is the capital of the Department of Yzabal and the residence of the American consular agent who has the ports of Livingston, Santo Tomas, and Puerto Barrios in his district. The town is situated on a high bluff facing the sea at the mouth of the Rio Dulce. Drainage excellent. Water supply: Rain water stored in unscreened cisterns, all containing *stegomyia* larvæ. Prevailing diseases: Malaria, dysentery, whooping cough, and mumps. Loading of ships: In open sea about 1 mile from shore. Imports: General merchandise and construction material from Europe and United States. Exports: Coffee, hides, and deerskins to Europe, and bananas to Mobile.

## SANTO TOMAS.

Santo Tomas is situated on the coast 10 miles from Livingston and 2 miles from Puerto Barrios. The town site is on an elevation at the base of the foothills. Drainage: Excellent. Water supply: Rain water stored in unscreened tanks, in all of which *stegomyia* larvæ are present. Prevailing diseases: Malaria, mumps, dysentery. Loading of ships: In open bay about 1 mile from shore. Imports: None. All supplies are obtained from Livingston and Puerto Barrios. Exports: Bananas to Mobile.

## PUERTO BARRIOS.

The town is situated on the sea at the terminal of the International Railway of Central America and 278 miles from the port of San Jose, the Pacific terminal of the same railway. The town site is on low swampy ground and was originally a mangrove swamp, but now with a few ditches and filling here and there some solid ground has been formed sufficient for the foundation of the few well-constructed houses of the railway, United Fruit Co., comandancia and hotel, and the many manaca shacks that decorate three-fourths of the village and serve as shelter for the 800 mixed population. The extensive sanitary improvements proposed by the railway company have not up to the present been accepted by the Guatemala Government. The fruit company and the railway company are bettering conditions at Puerto Barrios and other places adjoining their holdings. At the present time these companies have their special civil engineer here engaged in construction work. The work now in progress is the extension of the pier to a distance of 1,600 feet out in the bay with a structural steel building on the end, and the erection at Quirigua, 50 miles inland, on the railway line, of a modern reenforced concrete hospital for the treatment of United Fruit Co. employees.

Prevailing diseases: Malaria, dysentery, and intestinal parasites. Sick and injured from this port are taken to the hospitals at Dartmouth and Zacapa. Water supply: Rain water stored in cisterns, some screened and others not. A limited supply of water piped from the railway tank one-half mile from town and distributed at several points in the village. At times this water is inadequate and other sources must be relied upon. Mosquitoes: *Stegomyia* present but not as numerous as in former years. Loading of ships: All vessels except the large passenger ships of the United Fruit Co. discharge and receive cargo and passengers at the railway dock. Imports: General merchandise, construction material from Europe and the United States. The greater portion of the freight landed at Barrios is placed in sealed cars and taken to the customhouse at Guatemala City. Freight for points this side of the Guatemala customhouse is passed by the Barrios customhouse and sent in sealed cars to the intermediate stations on the railway line. Exports: Bananas, coffee, and hides to the United States; to Europe, coffee and hides.

## INLAND TOWNS.

The following places on the railway are in close communication with Puerto Barrios, viz: Tenedoris, Cayuga, Senega, Dartmouth, Morales, Virginia, Montufa, Quiiga, Los Amates, Santa Ines, Iguana, Gualan,

San Pablo, Zacapa, Cabanas, Jicoro, El Rancho, Progreso, Estrada Cabrera, Sanarate, Aguaente, and Guatemala City. So far as I have been able to learn stegomyia are found at all points on the line up to El Rancho. Zacapa is the spot where in the past the epidemics of yellow fever have played the most havoc. Frequent inspections have failed to show anything of a suspicious nature in the railway hospital at Zacapa or the fruit company hospital at Dartmouth.

*Record of cases and deaths at the company hospitals.*

	Month.	Malaria.		Other diseases.		Total cases.
		Cases.	Deaths.	Cases.	Deaths.	
United Fruit Co. hospital at Dartmouth ..	April....	51	1	60	2	111
	May.....	74	-----	62	4	136
	June.....	121	4	75	-----	196
International Ry. hospital at Zacapa .....	May.....	203	1	29	1	232
	June.....	128	1	32	1	160

GUATEMALA CITY.

The sanitary conditions are good, except that flies, fleas, rats, and mosquitoes are all very numerous. So far I have not found the stegomyia in the city. At Esquintla, 30 miles from the city on the Pacific section of the International Railway, the stegomyia are numerous over the town and particularly in and about the railway depot.

Prevailing diseases: In the reports of the general hospital malaria heads the list of diseases treated and intestinal parasites take second place. The leper hospital has a capacity of 150 beds and appears always full. The Government of Guatemala has under consideration the establishment of a sanatorium for consumptives. Smallpox is prevalent in remote sections of the country. The laws require vaccination and revaccination every five years.

SAN JOSE DE GUATEMALA.

This town is the Pacific terminal of the International Railway of Central America. Population: About 3,000, mostly natives and negroes in the employ of railway and dock company. Prevailing diseases: Malaria and dysentery. At this port, owing to the distance being only 75 miles from Guatemala City, nearly all the sick go to the General Hospital for treatment. Water supply: Rain water stored in unscreened tanks, also artesian wells at the hotel and wharf agency. Loading of ships: A pier extends out beyond the surf, and from there the cargoes are taken in lighters out to the ships at anchor some half mile in open sea. Imports: General merchandise and construction material from the United States and Europe, either direct or via the Mexican railways and Salina Cruz, Mexico. Exports: Coffee; about 125,000 bags yearly to San Francisco, Cal., and some to Europe. However, with the consolidation of the Central and Northern Railways into the International, practically all the coffee from the Pacific slope is now shipped out of the country via Puerto Barrios.



**CHAMPERICO.**

This port is at the terminal of the Masaltenango branch of the International Railway and formerly was one of the important coffee-shipping ports. Loading ships at this port is done in open bay.

**OCOS.**

This port is located at the extreme corner of Guatemala on the boundary line of Mexico at the termination of a short railway. Prevailing diseases: Nothing is known, except such information as is obtained by persons at Livingston who have relatives and friends residing at Ocos, who report that last season several cases and deaths from yellow fever occurred. Mention of this focus was reported by the writer to the bureau several months ago. Loading of ships: Vessels at Ocos are loaded in open bay with cargoes of coffee for foreign ports.

**HAWAII.****Examination of Rodents for Plague Infection.**

During the week ended July 6, 1912, 543 rats and mongoose were examined at Hilo and 1,396 at Honokaa. No plague infection was found. The last case of human plague occurred at Honokaa March 15, 1912. The last plague-infected rat was found between Honokaa and Kapulena April 24, 1912.

**HONDURAS.****Sanitary Status of Ports and Inland Towns.**

Acting Assistant Surgeon Ames reported July 4:

**VERA CRUZ.**

The town has a mixed population of about 100. Water supply, a few cisterns unscreened. However, no stegomyia were found in any of them. Prevailing disease: Malaria.

**CUYAMEL PLANTATION.**

Cuyamel plantation is 7 miles inland and is connected with Vera Cruz by a standard-gauge railroad. Population, 2,500. Prevailing diseases: Malaria, dysentery, measles, mumps, and whooping cough. Water supply, collected from Cuyamel River as required. The Cuyamel Co. has about erected an up-to-date water system with a 40,000-gallon steel tank on a 60-foot tower. The water is pumped from the river by a hydraulic ram. Numerous water mains are distributed over the plantation village. This is the only place I have found wherein stegomyia and rats do not exist.

**OMOA.**

Omoa is situated on the coast 12 miles from Puerto Cortes at quite an elevation in the foothills of the Omoa Mountains. It was founded by the Spaniards in 1515. Population: 500. Water supply: Rain

water stored in unscreened tanks, all filled with *stegomyia* larvæ. Prevailing diseases: Malaria, whooping cough. The E. P. Morse Timber Co. have a concession from the Honduras Government for the construction of a dock at Omoa and the building of a standard-gauge railroad along the coast in the direction of the Motagua River and up the valley inland to the extensive pine forest and probably later over on the border joining the Guatemala Railway. Work on this new project is being pushed very rapidly, a large force of laborers being employed on the grading. The engineer in charge reports little sickness among the men except a few cases of malarial fever.

Loading of ships: Vessels are loaded in open bay about 800 feet from shore. Exports: Bananas to Mobile and New Orleans.

The above-named places are in the district of Puerto Cortes.

#### PUERTO CORTES.

Puerto Cortes was founded by the Spaniards in the sixteenth century. Population is 2,400, composed of natives, Jamaica negroes, and all nationalities. Water supply: One hundred and thirty-three cisterns, many of them as yet not screened. However, the commandant has the matter in hand and has served notice on the property holders that the law governing the screening of water containers will be enforced. Prevailing diseases: Malaria, dysentery, measles, mumps, and blackwater fever. After looking over the record in the blackwater case and hearing the opinion of the attending physician I fully concurred in the diagnosis.

Poliomyelitis: Dr. J. Edward Austin, the American physician who has resided at Cortes for the past 18 years, states that during that time he has had three cases of poliomyelitis in his practice at Puerto Cortes. The three cases lived some distance apart and in no way visited or associated.

Loading of ships: Vessels load at the dock, which is about 60 feet wide, and owing to the extreme deep water along the shore the dock extends parallel with the beach. In the vicinity of the dock are many houses, unscreened cisterns, and an abundance of rats and *stegomyia calopus*. Exports: Bananas, hides, deerskins, coffee to the United States, and sarsaparilla in bales to London, England, via New York and New Orleans.

#### ULUA RIVER BAR.

Ulua River Bar is situated 16 miles from Puerto Cortes, and is now one of the regular banana-shipping points. Vessels load in open sea one-fourth of a mile from shore. Banana plantations line the Ulua River for 115 miles. A steamboat makes weekly trips, touching at all farms and receiving fruit. The health of that section is excellent, there being only occasionally a few cases of malaria.

#### TELA.

Tela is situated on a sandy elevation facing the sea some 30 miles from Puerto Cortes; the population is about 400, mostly natives. Prevailing disease: Malaria. Loading of ships: In open sea about half mile from shore. Exports: Bananas to Mobile and New Orleans.

Imports: General merchandise from the United States. Water supply: Rain water stored in cisterns some of them screened. A concession has been granted to an American for the construction of a railroad from Tela inland to Progreso, a distance of 75 miles. The work will commence at an early date.

#### CEIBA.

This town, 30 miles from Tela, on the coast, is located on a broad, sandy plain in the foothills of the coast mountains, and can well be called the Paris of the Central American coast, for it is a beautiful place, with fine houses, wide, splendidly kept streets, and paved sidewalks. It has all the appearances of a progressive, thriving city. Population, 5,000. Water supply: Screened cisterns and numerous artesian wells. A project is under way for piping water from the Congohoy River into town for drinking and fire purposes. Prevailing diseases: Malaria and whooping cough. Two cases of blackwater fever occurred during the past month, one of them fatal.

Loading of ships: All ships load in open sea, except the Vacarro Line, which has its own private dock. This dock projects out in the sea about 2,200 feet, is electric lighted, and, owing to winds and spray from the sea, it is fair to presume that the wharf is free from rats. Imports: General merchandise and construction material from the United States and Europe via New York and New Orleans. Exports: Bananas and hides to Mobile and New Orleans.

#### TRUXILLO.

Truxillo is situated on a very high bluff facing the sea. Population is about 2,500, mostly natives. Water supply: Cistern and piped water from mountain stream. Mosquitoes: *Stegomyia* numerous. Imports: General merchandise, construction material from United States and Europe via New York and New Orleans. Exports: Bananas, rubber, hides, and deer skins to Mobile and New Orleans. Loading of ships: In open bay, half mile from shore. A concession has been granted to an American for the construction of a railroad some 100 miles inland to Olancho, the gold-mining district of Honduras. The preliminary survey of this road is now being made.

#### RUATAN.

Ruatan is an island, 40 miles from the mainland off Truxillo, and inhabited mostly by negroes. Population of Coxenhole, the main town and harbor, about 400. Water supply: Rain water stored in cisterns all containing *stegomyia* larvæ. Loading of ships: In narrow bay, 300 feet from shore. Imports: General merchandise. Exports: Coconuts to Mobile and New Orleans.

#### UTILLA.

Utila is an island, 25 miles off the mainland, in the vicinity of Ceiba. It has one town and a small half land-locked harbor. Population, about 600. Water supply: Rain water stored in cisterns; *stegomyia*, present.

## INLAND TOWNS.

Inland towns on the line of the Honduras National Railway having direct communication daily with Puerto Cortes are Baracoa, Rio Blanco, Choloma, Rio Blanco, San Pedro, Chamelecon, and Pimienta, the end of the line.

## SAN PEDRO.

San Pedro is 30 miles from Puerto Cortes. Elevation above sea level, 215 feet. Water supply: Piped from mountain stream, quality excellent, quantity abundant. Mosquitoes: In some sections of town stegomyia very numerous, especially in and about the International Hotel. Prevailing diseases: Malaria, mild type. San Pedro is the distributing point for all produce and general merchandise for the Departments of Cortes, Santa Barbara, Santa Rosa, and Yojoa. A well-used trail connects San Pedro with Santa Rosa, and from there branches off to Salvador and Guatemala. From Pimienta the mails are forwarded weekly by pack mule to all interior points, including Tegucigalpa, the capital. Health and sanitary conditions are good.

## Smallpox in the Interior.

The American consul at Puerto Cortes reports, July 29: The report of smallpox in the interior has been officially confirmed. The disease has not as yet appeared in Puerto Cortes.

## ITALY.

## Examination of Emigrants.

Surg. Geddings, at Naples, reports:

*Vessels inspected at Naples, Messina, and Palermo, week ended July 15, 1912.*

## NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
July 9	Sant' Anna.....	New York.....	494	155	780
9	Soperga.....	do.....			
10	Saxonia.....	do.....			
11	Taormina.....	do.....	846	160	1,320
12	Calabria.....	do.....	165	35	210
	Total.....		1,505	350	2 310

## MESSINA.

July 8	Saxonia.....	New York.....			
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## PALERMO.

July 9	Kaiser Franz Joseph I.....	New York.....			
9	Saxonia.....	do.....			
10	Sant' Anna.....	do.....	438	500	300
10	Taormina.....	do.....	266	250	160
13	Calabria.....	do.....	320	260	150
	Total.....		1,024	1,010	610

**JAPAN.****Formosa—Cholera—Plague.**

Consul Reat, at Tamsui, reports July 4 that 7 cases of cholera, with 4 deaths, and 10 cases of plague, with 7 deaths, occurred in the island of Formosa during the week ended June 29, 1912.

**JAVA.****Suarabya—Smallpox.**

The American consul at Batavia reports, June 17: Official notification was received June 4 declaring Suarabya infected with smallpox. Later advices reported the disease to be decreasing. •

**PERU.****Iquitos—Beriberi—Yellow Fever.**

The American consul at Iquitos reports, June 18, that 3 deaths from beriberi and 3 from yellow fever occurred at Iquitos during the month of May, 1912.

**PHILIPPINE ISLANDS.**

Passed Asst. Surg. Victor G. Heiser, director of health and chief quarantine officer of the Philippine Islands, reports June 25:

**Manila—Case of Plague.**

The first death from plague in Manila for more than seven years occurred on June 18, 1912. The victim was a Filipino, a watchman in the Chinese district, and he resided on Calle Antonio Rivera, in Tondo. From the very best information obtainable, there is no evidence to show that the man had been out of the Philippine Islands during the past few years. He was taken ill on June 14, had a temperature of 41°, and soon developed a femoral bubo. The symptoms increased in severity, other buboes appeared, and the man died on the evening of June 18. Necropsy showed the typical lesions of bubonic plague. Smears made from the spleen showed bipolar staining organisms. Inoculations made into guinea pigs resulted fatally and agglutination tests were positive, so that the diagnosis, both, clinical and bacteriological, has been confirmed.

Rats are caught at weekly intervals in Manila and examined, but no plague has been found among them since June, 1906.

A house-to-house inspection of Manila has been made and no further cases of plague have been found, neither are there any evidences of any special mortality among rats.

Three gangs of rat catchers have been put to work, one at the place where the man worked, one at the place where he lived and died, and another in sections believed likely to be infected, but so far no plague rats have been found.

The house in which the man died is a so-called "hard material" house, and is of a much better class than the average found in that section of the city. Nothing noteworthy with regard to rats was ascertained at the house.

In view of the foregoing, it is obvious that the origin of the infection in this case is unknown. There is, however, the interesting fact

that at the necropsy the tonsils were found to be in a sloughing condition.

#### Plague and Cholera Quarantine.

The conditions with regard to plague and cholera in near-by foreign countries remain about the same. Considerable protest has been made against the examination of the stools of incoming passengers for cholera bacilli. In some instances false and misleading reports have been circulated with regard to the manner in which this work was being done, and charges made that women were being subjected to annoyance. No women whatsoever have been examined, nor has the examination been any different from that which was conducted in New York last year.

#### Quarantine at Mariveles.

During the week there were 190 persons in quarantine at Mariveles quarantine station. There were 127 in quarantine from the preceding week, 63 entered quarantine, 127 were released, and 63 remain in quarantine at the close of the week.

#### PORTO RICO.

##### Plague Situation.

On July 30, 1 case of plague was reported in the Puerta de Tierra section of San Juan; July 31 and August 1, no case; August 2, the diagnosis of plague was confirmed in a case which had been reported at Santurce as suspicious on July 18; August 3 to 5 inclusive, no new cases. This makes a total for all Porto Rico, to and including August 5, of 47 cases, of which 31 occurred in the city of San Juan, including the section known as Puerta de Tierra; 11 in Santurce, a residential suburb of San Juan; 2 at Carolina, a town 13 miles from San Juan; 1 at Loiza, a short distance from Carolina; 1 at Dorado, 13 miles from San Juan; and 1 on a vessel at Arroyo, on the southern coast of the island.

Passed Asst. Surg. Creel reports as follows:

##### *Rats examined July 21 to 27, inclusive.*

Place.	Rats examined.	Rats found infected.	Rats found suspicious.
All Porto Rico.....	1,694	2	
San Juan municipality:			
San Juan.....	316		
Puerto de Tierra.....	174		
Santurce.....	176	2	

A summary of the plague situation to July 27, including all human and rodent cases reported or discovered, was as follows: Rats examined, 4,510; rats found infected, 54; human cases, 43; deaths, 28.

##### *Inspections made July 21 to 27, inclusive.*

Houses inspected.....	792
Cars inspected.....	49
Pieces of freight fumigated.....	655
Pieces of freight repacked.....	192
Pieces of freight inspected and passed.....	11,693



## SIAM.

## Bangkok—Cholera—Smallpox.

Vice and Deputy Consul General Hansen at Bangkok reports, June 19, that 281 deaths from cholera and 21 from smallpox occurred at Bangkok during the four weeks ended June 15, 1912.

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

## Reports Received During Week Ended Aug. 9, 1912.

[These tables include cases and deaths recorded in reports received by the Surgeon General, Public Health and Marine-Hospital Service, from American consuls through the Department of State and from other sources.]

## CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Dutch East Indies:				
Java—				
Rembang, province...	July 4 .....			Present.
Sumatra—				
Bovenlandes, province.	June 27-July 4 <sup>1</sup> .....			Do.
India:				
Bassein .....	June 19-25 .....	1	1	
Bombay .....	June 23-29 .....	213	146	
Madras .....	....do. ....	5	4	
Moulmine .....	June 19-25 .....	4	4	
Indo-China—				
Saigon .....	June 18-24 .....	79	67	
Japan:				
Formosa .....	June 16-29 .....	31	13	
Siam:				
Bangkok .....	May 19-June 15 .....		281	
Straits Settlements:				
Singapore .....	June 9-15 .....	3	2	
Turkey in Asia:				
Aleppo .....	May 19-July 14 .....	263	231	

## YELLOW FEVER.

Brazil:				
Manaos .....	June 30-July 6 .....		3	
Peru:				
Iquitos .....	May 1-31 .....		3	

## PLAGUE.

Arabia:				
Oman—				
Maskat .....	June 1-22 .....	1		
Brazil:				
Netheroy .....	Mar. 25 .....	8	2	
Rio de Janeiro .....	June 23-29 .....	1		
China:				
Hongkong .....	June 16-22 .....	127	99	
Wenchang .....	June 4 <sup>2</sup> .....			On the island of Hainan, 10 to 20 cases daily.
Great Britain:				
Liverpool .....	July 26 .....	1		
India:				
Bombay .....	June 23-29 .....	24	23	
Indo-China:				
Saigon .....	June 18-24 .....	1	1	
Japan:				
Formosa .....	June 16-29 .....	14	12	
Persia:				
Bushir .....	June 1-15 .....	23	16	June 1-7, on the route to Shiraz, 4 fatal cases.
Porto Rico:				
San Juan .....	July 30 .....	1		
Santurce .....	Aug. 2 .....	1		
Straits Settlements:				
Koula Lampour .....	Apr. 15 <sup>3</sup> .....	3	1	
Singapore .....	June 9-15 .....	1	1	
Turkey in Asia:				
Adalia .....	May 28-June 13 .....	1	1	July 4, present.

<sup>1</sup> Bulletin Quarantenaire d'Egypte, July 4, 1912.

<sup>2</sup> From the Veröffentlichungen des Kaiserlichen Gesundheitsamtes, July 10, 1912.

<sup>3</sup> Bulletin Quarantenaire d'Egypte, June 20, 1912.

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

## Reports Received During Week Ended Aug. 9, 1912.

## SMALLPOX.

Places.	Date.	Cases.	Deaths.	Remarks.
Australia:				
Townsville.....	May 24.....			1 case on s. s. Yawata Maru from Japan.
Austria-Hungary:				
Bohemia.....	May 19-July 6.....	13		
Galicia.....	May 26-July 6.....	13		
Brazil:				
Rio de Janeiro.....	May 19-June 22...	8	4	
Canada:				
Montreal.....	July 21-27.....	4		
China:				
Hongkong.....	June 16-22.....	1	1	
Shanghai.....	June 17-30.....		3	
France:				
Nantes.....	July 1-6.....	3		
Germany.....	July 7-13.....	4		
Hawaii:				
Honolulu.....	July 9-13.....	1		
Honduras.....	July 19.....			Present in the interior.
India:				
Bombay.....	June 23-29.....	17	15	
Madras.....	do.....	1	1	
Java:				
Surabaya.....	June 4-17.....			Still epidemic, but decreasing.
Mexico:				
Aguascalientes.....	July 15-21.....		2	
Guaymas.....	July 14-20.....			Present in small towns in vicinity.
Mexico.....	June 23-July 6.....	68	33	
Salina Cruz.....	June 29-July 6.....	2	1	
San Luis Potosi.....	May 5-11.....		2	
Portugal:				
Lisbon.....	July 7-13.....	3		
Russia:				
Reval.....	June 1-30.....	1		
St. Petersburg.....	July 1-6.....	6	6	
Siam:				
Bangkok.....	May 19-June 15...		21	
Spain:				
Cadiz.....	June 1-30.....		2	
Valencia.....	July 7-13.....	9	1	
Straits Settlements:				
Singapore.....	June 9-15.....		1	
Turkey in Asia:				
Beirut.....	July 7-13.....	10		

## Reports Received from June 29 to Aug. 2, 1912.

[For reports received from Dec. 30, 1911, to June 28, 1912, see PUBLIC HEALTH REPORTS for June 28, 1912. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

## CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Ceylon:				
Colombo.....	May 19-25.....	1		In the port.
China:				
Amoy.....	June 1-20.....			Present in vicinity.
Swatow.....	June 1-22.....			Sporadic cases occurring in the port.
India:				
Bassein.....	May 5-June 8.....	15	14	
Bombay.....	May 19-June 22...	1,065	858	
Calcutta.....	Apr. 21-27.....		87	Received out of date.
Do.....	May 5-June 8.....		199	
Madras.....	May 19-June 8.....	3	2	
Maulmain.....	May 5-June 8.....	13	13	
Rangoon.....	Apr. 1-30.....	25	24	
Indo-China:				
Saigon.....	May 14-June 10...	121	91	
Russian Empire:				
Astrakhan.....	June 11-July 12...	2	1	
Vitebsk.....	July 29.....	2	1	

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from June 29 to Aug. 2, 1912.

## CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Siam:				
Bangkok.....	Apr. 21-May 18....		600	
Straits Settlements:				
Singapore.....	May 12-June 8....	9	12	
Turkey in Asia.....				Total May 19-June 15: Cases 58, deaths 67.
Adana.....	May 14-20.....	11	6	
Alexandretta.....	May 28-June 15....	3	1	

## YELLOW FEVER.

Brazil:				
Manaos.....	June 2-July 6....		16	
Pernambuco.....	Apr. 16-30.....		3	
Chile:				
Toco district.....	May 1-16.....	62	17	
Tocopilla.....	May 1-June 17....	502	195	Total Jan. 28-June 17: Cases 1,072, deaths 374, including report, p. 1058, Part I.
Ecuador:				
Duran.....	May 1-15.....	1	1	
Guayaquil.....	May 1-31.....	37	21	
Milagro.....	May 16-31.....	5	2	
Naranjito.....	May 1-31.....	4	2	
Yaguachi.....	May 16-31.....	1		
Mexico:				
Merida.....	July 25.....	1	1	
San Juan Bautista.....	June 23-July 7....	6		
Venezuela:				
Caracas.....	May 1-June 30....		5	
La Guaira.....	May 1.....	1		
Macuto.....	June 1.....	1	1	
Maiquetia.....	June 17.....	1	1	

## PLAGUE.

Chile:				
Iquique.....	May 26-June 22....	16	10	
China.....				May 18-June 15 present in the magistracies of Fungshun, Cayung, and Puning.
Amoy.....	May 20-June 1....	46	40	Present May 18-June 29 in Amoy and vicinity.
Ampo.....	May 18-June 29....			Present.
Chifu.....	June 2-8.....			2 deaths on s. s. Cheongshing between Tientsin and Taku.
Hongkong.....	May 12-June 15....	1,006	825	
Packhoi.....	May 1-29.....		35	
Tientsin.....	June 2-8.....	1	1	From s. s. Cheongshing from Hongkong.
Cuba:				
Havana.....	July 4-22.....	3	1	
Ecuador:				
Guayaquil.....	May 1-31.....	4	2	
Dutch East Indies.....				May 12-June 15: Cases, 39; deaths, 33, in the eastern part.
Java—				
Provinces—				
Kediri.....	Mar. 31-Apr. 6....	2	2	
Madiven.....	do.....	3	3	
Egypt.....				Total, June 1-July 2: Cases, 748; deaths, 389, including report p. 1059, Pt. I.
Alexandria.....	May 27-June 26....	6	1	
Port Said.....	May 29-June 14....	2		
Provinces—				
Assiout.....	May 25-June 27....	12	5	
Beni Souef.....	May 30-June 26....	13	9	
Carchieh.....	Apr. 28-July 2....	7	2	
Fayoum.....	Apr. 28-July 2....	48	26	
Galloubeh.....	Apr. 23-June 3....	1		
Girgeh.....	May 26-July 2....	40	42	
Minieh.....	May 27-July 2....	32	7	

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

## Reports Received from June 29 to Aug. 2, 1912.

## PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
<b>India:</b>				
Bombay.....	May 19-June 22....	196	154	Report Apr. 27 received out of date.
Calcutta.....	Apr. 21-June 8.....	...	346	
Karachi.....	Apr. 1-June 24.....	60	60	
Rangoon.....	Apr. 1-30.....	51	46	
Bombay Presidency and Sind.....	Apr. 21-May 25....	1,434	1,211	
Madras Presidency.....	.....do.....	64	57	
Bengal.....	.....do.....	443	406	
Babar and Orissa.....	.....do.....	4,796	4,167	
United Provinces.....	.....do.....	6,794	6,370	
Punjab.....	.....do.....	13,349	10,940	
Burma.....	.....do.....	125	108	
Central Provinces.....	.....do.....	283	238	
Mysore State.....	.....do.....	55	50	
Hyderabad State.....	.....do.....	217	175	
Central India.....	.....do.....	276	227	
Rajputana and Ajmere.....	.....do.....	490	411	
Merwara.....	.....do.....	...	...	
Kashmir.....	.....do.....	229	134	Total for India Apr. 21-May 25: Cases, 28,555; deaths, 24,494.
<b>Indo-China:</b>				
Saigon.....	May 14-June 10....	22	14	
<b>Japan:</b>				
Formosa.....	Apr. 22-June 15....	67	47	
<b>Persia:</b>				
Bushir.....	May 12-June 1....	107	100	Total Feb. 4-June 1: Cases 1,022; deaths 703, including report, p. 1060, Pt. I.
<b>Philippine Islands:</b>				
Manila.....	June 14-18.....	1	1	
Mariveles quarantine station.....	Apr. 30-May 7....	1	1	From s. s. Taisang from Amoy.
<b>Porto Rico:</b>				
Arroyo.....	June 22.....	1	...	Total June 14-Aug. 5: Cases, 47; deaths, 28.
Carolina.....	June 25-July 19....	2	2	On the schooner Guillermito from San Juan.
Dorado.....	July 15.....	1	1	
Loiza.....	June 28.....	1	1	
San Juan.....	June 21-July 19....	18	11	Total June 14-Aug. 2: Cases, 31; deaths, 16.
Santurce.....	June 22-July 26....	10	3	
<b>Siam:</b>				
Bangkok.....	Apr. 21-May 18....	...	1	
<b>South Africa:</b>				
Durban.....	.....	...	...	Jan. 14-June 21: Cases 31, deaths 25, including report, p. 1060, Pt. I.
<b>Straits Settlements:</b>				
Singapore.....	May 5-June 8.....	12	9	
<b>Turkey in Asia:</b>				
Basra.....	May 20.....	1	1	
Jiddah.....	May 18.....	1	...	
<b>West Indies:</b>				
Trinidad.....	.....	...	...	Total Apr. 1-June 13: Cases 11, deaths 7, including report, p. 1060, Pt. I; 3 of these cases were in Tunapuna.
Do.....	July 2-11.....	2	...	
<b>Venezuela:</b>				
Caracas.....	June 1-30.....	2	2	

## SMALLPOX.

<b>Algeria:</b>				
Algiers.....	Jan. 1-Apr. 30....	17	...	
Constantine.....	Apr. 1-30.....	4	...	
<b>Arabia:</b>				
Aden.....	June 18-24.....	...	1	
<b>Australia:</b>				
Fremantle quarantine station.....	Apr. 19.....	1	...	From s. s. Malwa from London via Colombo.
<b>Austria-Hungary:</b>				
Bohemia.....	May 12-18.....	1	...	
Galicia.....	.....do.....	2	...	

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from June 29 to Aug. 2, 1912.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Pernambuco.....	Apr. 16-30.....		39	
British East Africa:				
Mombasa.....	May 1-31.....	2		
Canada:				
Provinces—				
Newfoundland—				
St. Johns.....	July 14-20.....	5		
Nova Scotia—				
Halifax.....	July 7-13.....	1		
Ontario—				
Ottawa.....	June 9-15.....	1		
Windsor.....	June 12-22.....	2		
Quebec—				
Montreal.....	June 16-22.....	2		
Chile:				
Coquimbo.....	Mar. 1-May 1.....	30		
Do.....	May 26-June 22.....	37	7	
La Serena.....	Nov. 30-May 7.....	300	40	
China:				
Amoy.....	May 21-June 8.....			Present in vicinity.
Chungking.....	May 5-June 15.....			Present.
Hongkong.....	May 12-June 8.....	18	11	
Nanking.....	May 19-June 29.....			Do.
Shanghai.....	May 28-June 16.....		7	
Tientsin.....	June 2-8.....		1	
Egypt:				
Cairo.....	May 14-27.....	4		
Port Said.....	do.....	2	1	
France:				
Nantes.....	June 17-23.....	1		
Paris.....	June 2-22.....	4	1	
Germany.....				Total June 2-July 6: Cases 21.
Great Britain:				
Bristol.....	June 22-28.....	2		
Liverpool.....	June 2-8.....	1		
India:				
Bombay.....	May 19-June 8.....	128	106	
Calcutta.....	Apr. 21-27.....		2	
Do.....	May 5-25.....		8	
Karachi.....	May 19-26.....	1	1	
Madras.....	May 19-June 15.....	6	5	
Mulmaine.....	Jan. 1-May 4.....		85	
Rangoon.....	Apr. 1-30.....	154	57	
Indo-China:				
Saigon.....	May 14-20.....	3	2	
Italy:				
Leghorn.....	June 9-July 6.....	9		
Naples.....	June 2-13.....	20	2	
Palermo.....	May 26-July 6.....	4	2	
Turin.....	June 3-9.....	1		
Japan:				
Kobe.....	June 3-23.....	3		
Java:				
Batavia.....	May 12-July 15.....	19	6	
Surabaya.....	Apr. 1-30.....	155	70	
Mexico:				
Aguascalientes.....	June 9-July 14.....		4	
Durango.....	June 1-30.....	1	1	
Frontera.....	July 7-11.....	1		
Guadalajara.....	June 9-July 6.....	3	3	
Juarez.....	June 16-22.....		1	
Mazatlan.....	June 19-July 16.....		4	Total Jan. 1-June 30; deaths, 29.
Mexico.....	May 19-June 22.....	206	103	
Puerto Mexico.....	July 11.....	1	1	
San Luis Potosi.....	Apr. 7-20.....	2	2	
Peru:				
Callao.....	May 19-June 29.....			Present.
Portugal:				
Lisbon.....	May 27-July 6.....	18		
Russia:				
Libau.....	May 14-June 13.....		1	
Do.....	June 22-28.....	2		
Moscow.....	May 19-June 22.....	19	3	
Odessa.....	May 19-25.....	1	1	
Do.....	June 2-29.....	5	2	
Riga.....	June 9-29.....	8		
St. Petersburg.....	May 27-June 29.....	56	14	
Warsaw.....	Apr. 21-May 25.....	28	12	

## CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from June 29 to Aug. 2, 1912.

## SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Siam:				
Bangkok.....	Apr. 21-May 18....		41	
Siberia:				
Vladivostok.....	May 17-23.....	1		
South Africa:				
Durban.....	Apr. 28-May 31....	6	2	
Spain:				
Almeria.....	June 1-30.....		3	
Barcelona.....	July 1-6.....		1	
Cadiz.....	May 1-31.....		2	
Seville.....	June 1-30.....		6	
Valencia.....	June 2-July 6.....	61	2	
Straits Settlements:				
Singapore.....	May 5-June 8.....	5	2	
Switzerland:				
Berne.....	May 5-11.....	2		
Geneva.....	.....do.....	1		
Lucerne.....	May 12-18.....	1		
Neuchatel.....	.....do.....	1		
Turkey in Asia:				
Beirut.....	May 26-July 6.....	70		
Turkey in Europe:				
Constantinople.....	May 27-July 7.....		63	
Venezuela:				
La Guaira.....	June 6.....	1		

## MORTALITY.

## WEEKLY MORTALITY TABLE, FOREIGN AND INSULAR CITIES.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.
Aguascalientes.....	July 21	40,000	55	2				2	2	1	1	1	1
Amsterdam.....	July 13	582,674	17	3						1			5
Asuncion.....	June 8	75,000	22	3						1			
Do.....	June 22		17	3						1			
Athens.....	July 13	250,010	76	17						1	1	1	
Baracoa.....	July 20	27,000	7	1						2			
Barcelona.....	.....do.....	591,272	205	23						2		1	1
Beirut.....	July 13	80,000	20							2			
Belfast.....	.....do.....	391,051	119	24						1			2
Belgrade.....	July 6	90,050	33							1			
Bombay.....	June 29	979,445	834	54	23	140	15						
Bordeaux.....	July 13	253,000	86	2									1
Catania.....	July 19	207,000	82										
Christiania.....	July 13	248,000	44	11						3		1	
Constantinople.....	July 14	1,000,000	205	27				9		7	2	1	3
Dublin.....	July 13	406,536	130	22								7	4
Dundee.....	.....do.....	171,006	52	4								5	
Edinburgh.....	.....do.....	321,300	99	12								1	
Fiume.....	.....do.....	51,500	12	5									
Ghent.....	.....do.....	166,235	36	3								1	
Do.....	July 6		39	5									1
Glasgow.....	July 19	785,600	185									1	
Hamburg.....	July 13	953,079	254	25						2	3	5	2
Havre.....	.....do.....	136,159	59	8						1			
Hongkong.....	June 22	336,488			99			1		2			
Hull.....	July 13	282,987	74									4	
Kingston, Jamaica.....	.....do.....	59,739		1						1			
Leghorn.....	.....do.....	104,000	29								1		
Liege.....	July 6	168,735	34	4						1			
London.....	July 13	7,340,119	1,460							3	6	10	36



## MORTALITY—Continued.

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.
Madras.....	June 29	518,661	298	...	...	4	...	1	...	2	...	...	...
Mazatlan.....	July 23	22,000	20	3	...	...	...	1	...	...	...	...	...
Mexico.....	June 29	719,052	410	21	...	...	...	14	4	...	2	...	1
Do.....	July 6	...	447	19	...	...	...	19	6	...	5	1	2
Montreal.....	July 27	466,197	245	17	...	...	...	...	...	1	...	...	1
Nantes.....	July 6	170,535	42	11	...	...	...	...	...	...	...	1	...
Do.....	July 13	...	44	2	...	...	...	...	...	...	...	1	1
Newcastle-on-Tyne.....	do.....	269,193	67	5	...	...	...	...	...	2	...	...	...
Odessa.....	July 6	575,000	187	26	...	...	...	...	1	1	...	...	2
Palermo.....	July 13	340,000	147	7	...	...	...	...	1	3	3	...	2
Paris.....	do.....	2,888,110	878	209	...	...	...	...	...	2	8	6	12
Porfirio Diaz.....	July 29	16,000	12	1	...	...	...	...	...	...	...	...	...
Rangoon.....	June 8	293,316	181	...	11	2	...	2	...	...	...	...	...
Do.....	June 15	...	174	...	8	...	...	...	...	...	...	...	...
Rio de Janeiro.....	May 11	811,443	375	62	...	...	...	...	...	1	...	...	3
Do.....	May 18	...	419	66	...	...	...	...	...	...	...	1	4
Do.....	May 25	921,987	382	77	...	...	...	...	...	2	...	2	1
Do.....	June 1	...	434	78	...	...	...	2	...	...	...	2	9
Do.....	June 8	...	373	51	...	...	...	1	...	2	...	1	6
Do.....	June 22	...	371	49	...	...	...	...	...	3	...	2	1
Do.....	June 29	...	368	67	...	...	...	...	...	...	...	...	3
Saigon.....	June 24	250,000	68	...	1	67	...	...	...	...	...	...	...
St. Petersburg.....	July 6	1,062,400	910	114	...	...	...	6	1	24	4	5	69
Salina Cruz.....	June 22	6,000	...	3	...	...	...	...	...	...	...	...	...
Do.....	July 6	...	...	...	...	...	...	...	...	...	...	...	...
San Luis Potosi.....	May 11	82,946	80	7	...	...	...	2	...	5	...	...	...
Do.....	May 18	...	86	8	...	...	...	...	...	1	...	...	1
Santa Cruz de Teneriffe.....	July 6	46,000	8	1	...	...	...	...	...	...	...	...	...
Santiago de Cuba.....	July 20	53,614	48	...	...	...	...	...	...	3	...	...	...
Sarnia.....	July 27	9,936	2	...	...	...	...	...	...	...	...	...	...
Shanghai.....	June 23	500,000	146	18	...	...	...	2	1	1	3	4	5
Do.....	June 30	...	141	14	...	...	...	1	...	...	4	1	...
Singapore.....	June 15	303,328	297	36	1	2	...	1	...	2	...	...	...
Stockholm.....	July 6	346,599	88	19	...	...	...	...	...	...	...	...	3
Stoke-on-Trent.....	July 13	237,153	68	7	...	...	...	...	...	...	...	...	1
Tarragona.....	do.....	23,150	8	...	...	...	...	...	...	1	...	...	...
Toronto.....	July 27	392,000	150	5	...	...	...	...	...	...	1	1	...
Tripoli.....	June 30	50,000	53	3	...	...	...	...	1	3	...	...	...
Do.....	July 7	...	46	5	...	...	...	...	...	1	...	...	...
Turin.....	do.....	430,770	132	16	...	...	...	...	...	...	...	...	1
Do.....	July 14	...	143	15	...	...	...	...	...	2	...	1	...
Valencia.....	July 6	235,000	75	3	...	...	...	...	...	2	...	...	...
Do.....	July 13	...	80	5	...	...	...	1	...	1	...	...	...
Vancouver.....	do.....	110,000	27	...	...	...	...	...	...	...	...	2	...
Vera Cruz.....	do.....	32,000	28	2	...	...	...	...	...	2	...	...	...
Victoria.....	July 27	40,000	13	...	...	...	...	...	...	...	...	...	...
Vienna.....	June 15	2,081,335	611	99	...	...	...	...	...	...	4	5	10
Do.....	June 22	...	634	98	...	...	...	...	...	...	10	5	12
Do.....	June 29	...	586	99	...	...	...	...	...	1	3	3	11
Vigo.....	June 22	41,500	20	4	...	...	...	...	...	...	...	1	...
Do.....	June 29	...	20	3	...	...	...	...	...	...	...	1	...
Do.....	July 6	...	19	2	...	...	...	...	...	...	...	1	...
Warsaw.....	May 25	821,369	312	37	...	...	...	...	...	1	7	...	3
Winnipeg.....	July 13	166,552	60	5	...	...	...	...	...	...	...	1	1
Do.....	July 20	...	70	3	...	...	...	...	...	1	...	...	3
Yokohama.....	July 1	444,039	...	...	...	...	...	...	...	1	...	...	...
Do.....	July 8	...	...	...	...	...	...	...	...	2	...	...	...

## MORTALITY—FOREIGN AND INSULAR COUNTRIES AND CITIES (Untabulated).

ARGENTINA—*Rosario*.—Month of May, 1912. Population 213,380. Total number of deaths from all causes 345, including diphtheria 8, tuberculosis 38, typhoid fever 18.

BAVARIA—*Munich*.—Month of May, 1912. Population 610,000. Total number of deaths from all causes 822, including diphtheria 2, measles 10, scarlet fever 2, tuberculosis 126, typhoid fever 1.

FRANCE—*Marseille*.—Month of June, 1912. Population 550,619. Total number of deaths from all causes 830, including diphtheria 3, measles 3, scarlet fever 1, tuberculosis 121, typhoid fever 20.

GREAT BRITAIN.—Week ended July 6, 1912.

*England and Wales*.—The deaths registered in 95 great towns correspond to an annual rate of 10.8 per 1,000 of the population, which is estimated at 17,639,816.

*Ireland*.—The deaths registered in 22 principal town districts correspond to an annual rate of 13.8 per 1,000 of the population, which is estimated at 1,157,014. The lowest rate was registered at Galway, viz, 3.9 per 1,000, and the highest at Armagh, viz, 27.5 per 1,000.

*Scotland*.—The deaths registered in 18 principal towns correspond to an annual rate of 14.6 per 1,000 of the population, which is estimated at 2,182,400. The lowest rate was recorded at Perth, viz, 4.3, and the highest at Falkirk, viz, 27.5 per 1,000. The total number of deaths from all causes was 609, including diphtheria 9, measles 18, scarlet fever 4, typhoid fever 1.

HAWAII—*Honolulu*.—Three weeks ended July 20, 1912. Population 39,306. Total number of deaths from all causes 59, including diphtheria 1, tuberculosis 11, typhoid fever 1. Cases reported: Diphtheria 1, measles 1, smallpox 1, tuberculosis 11, typhoid fever 3.

ITALY—*Genoa*.—Two weeks ended July 15, 1912. Population 283,266. Total number of deaths from all causes 229, including diphtheria 2, tuberculosis 11, typhoid fever 3. Cases reported: Diphtheria 13, measles 9, scarlet fever 3, tuberculosis 27, typhoid fever 6.

NEW ZEALAND.—Month of May, 1912.

*Auckland*.—Population 104,728. Total number of deaths 72, including tuberculosis 1.

*Christchurch*.—Population 82,004. Total number of deaths 61, including diphtheria 1, tuberculosis 1.

*Dunedin*.—Population 65,690. Total number of deaths 43, including tuberculosis 3.

*Wellington*.—Population 71,427. Total number of deaths 51, including tuberculosis 1.

SPAIN—*Cadiz*.—Month of June, 1912. Population 67,306. Total number of deaths from all causes 176, including diphtheria 2, measles 3, smallpox 2, typhoid fever 1.

By authority of the Secretary of the Treasury:

RUPERT BLUE,  
Surgeon General,

*United States Public Health and Marine-Hospital Service.*

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